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1919

ATLAS

To Accompany a Report on the

Fishes of Illinois

S. A. Forbes R. E. Richardson

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ILLINOIS HISTORICAL SURVEY

STATE OF ILLINOIS
DEPARTMENT OF REGISTRATION AND EDUCATION
FRANCIS W. SHEPARDSON, Director

DIVISION OF THE
NATURAL HISTORY SURVEY
STEPHEN A. FORBES, Chief

Maps
Showing Distribution of Illinois Fishes
to Accompany a Report on the
Fishes of Illinois

BY

STEPHEN ALFRED FORBES, PH.D., LL.D.

AND

ROBERT EARL RICHARDSON, A.M.

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List of Maps

The general map of the distribution of collections (Map IV.) shows, by the location of the red spots, all the localities from which collections of fishes have been made by us in the work of the Natural History Survey. The distribution maps for the various species indicate in the same way all the localities from which representatives of the species have been taken. *For an accurate idea of the significance of these species maps, each should be compared with Map IV.*

The following numbered list of the counties of the state corresponds to the figures on these maps.

1. Jo Daviess
2. Stephenson
3. Winnebago
4. Boone
5. McHenry
6. Lake
7. Cook
8. Du Page
9. Kane
10. DeKalb
11. Ogle
12. Lee
13. Carroll
14. Whiteside
15. Rock Island
16. Mercer
17. Henry
18. Bureau
19. Putnam
20. La Salle
21. Kendall
22. Grundy
23. Will
24. Kankakee
25. Iroquois
26. Ford
27. Livingston
28. Marshall
29. Woodford
30. Stark
31. Peoria
32. Knox
33. Warren
34. Henderson
35. Hancock
36. McDonough
37. Fulton
38. Mason
39. Tazewell
40. McLean
41. Vermilion
42. Champaign
43. Piatt
44. Dewitt
45. Logan
46. Menard
47. Cass
48. Schuyler
49. Brown
50. Adams
51. Pike
52. Scott
53. Morgan
54. Sangamon
55. Christian
56. Macon
57. Moultrie
58. Douglas
59. Edgar
60. Clark
61. Coles
62. Cumberland
63. Shelby
64. Montgomery
65. Macoupin
66. Greene
67. Calhoun
68. Jersey
69. Madison
70. Bond
71. Fayette
72. Effingham
73. Jasper
74. Crawford
75. Lawrence
76. Richland
77. Clay
78. Marion
79. Clinton
80. St. Clair
81. Monroe
82. Randolph
83. Washington
84. Perry
85. Jefferson
86. Wayne
87. Edwards
88. Wabash
89. White
90. Hamilton
91. Franklin
92. Jackson
93. Williamson
94. Saline
95. Gallatin
96. Hardin
97. Pope
98. Johnson
99. Union
100. Alexander
101. Pulaski
102. Massac

I. & II. The three sections of Illinois, northern, central, and southern, and the ten stream systems of the state: I., the Galena District, II., the Rock River System, III., the Illinois River System, IV., the Lake Michigan drainage, V., the Mississippi River drainage, VI., the Kaskaskia River System, VII., the Wabash System, VIII., the Big Muddy River System, IX., the Saline River System, and X., the Cairo District.

III. Glacial geology of Illinois.

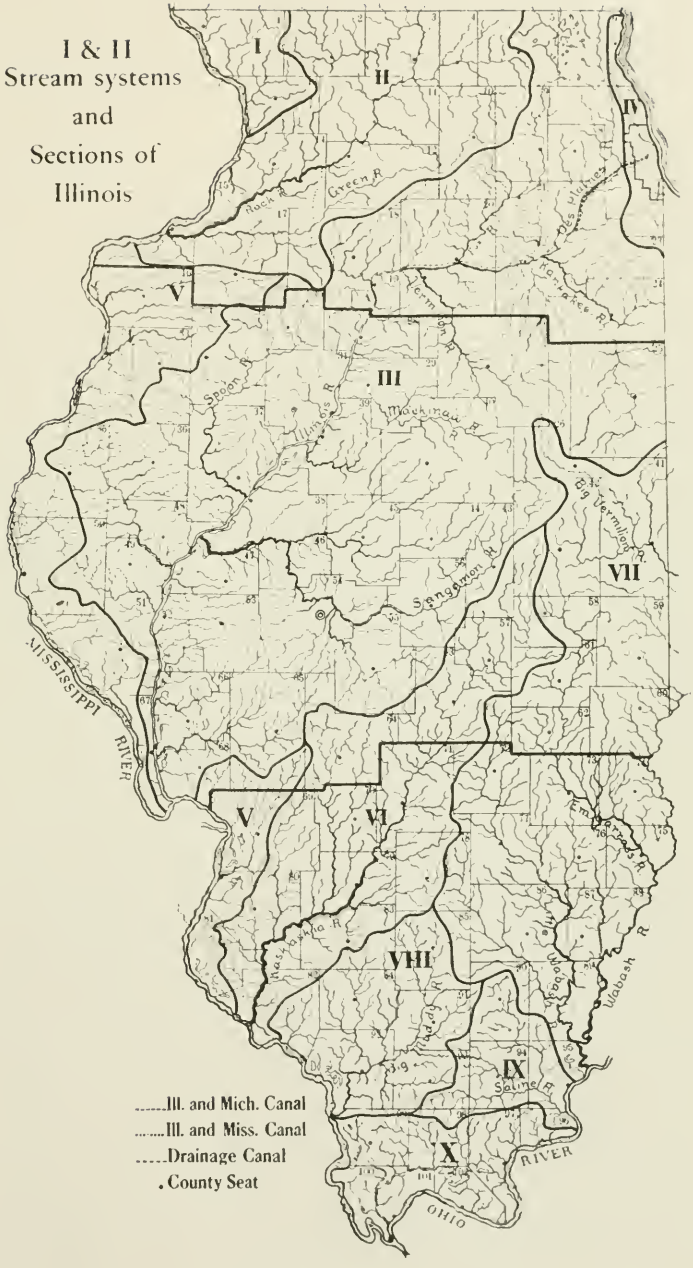
IV. Localities from which collections were made.

V.—CII. Distribution of species.

CIII. Northern species (●) and southern species (▲) in Illinois.

	Map No
Banded Darter, *Etheostoma zonale*	XCIII
Big-eyed Chub, *Hybopsis amblops*	XLIX
Black Bullhead, *Ameiurus melas*	LV
Black Crappie, *Pomoxis sparoides*	LXXI
Black-head Minnow, *Pimephales promelas*	XXVII
Black-sided Darter, *Hadropterus aspro.*	LXXXVII
Blackfin, *Notropis umbratilis atripes*	XLV
Bluegill, *Lepomis pallidus*	LXXVIII
Blunt-nosed Minnow, *Pimephales notatus*	XXVIII
Blunt-nosed River Carp, *Carpiodes difformis*	XIII
Boleichthys fusiformis	XCVIII
Boleosoma camurum	XCI
Brindled Stonecat, *Schilbeodes miurus*	LIX
Brook Silverside, *Labidesthes sicculus*	LXVIII
Bullhead Minnow, *Cliola vigilax*	XXXII
Channel-cat, *Ictalurus punctatus*	LII
Chub-sucker, *Erimyzon succeta oblongus*	XVI
Common Pike, *Esox lucius*	LXII
Common Red-horse, *Moxostoma aureolum*	XXI
Common River Carp, *Carpiodes carpio*	XII
Common Shiner, *Notropis cornutus*	XLI
Common Sucker, *Catostomus commersonii*	XVIII
Cottogaster shumardi	LXXXVIII
Dogfish, *Amia calva*	VII
Etheostoma jessiæ	XCIV
Etheostoma squamiceps	XCVI
Fan-tailed Darter, *Etheostoma flabellare*	XCVII
Fundulus dispar	LXIV
Gizzard-shad, *Dorosoma cepedianum*	VIII
Golden Shiner, *Abramis crysoleucas*	XXXI
Gray Pike, *Stizostedion canadense griseum*	LXXXIII
Green-sided Darter, *Diplesion blennius*	LXXXIX
Hadropterus phoxocephalus	LXXXVI
Hogsucker, *Catostomus nigricans*	XIX
Horned Dace, *Semotilus atromaculatus*	XXIX
Hybognathus nuchalis	XXV
Hybognathus nubila	XXVI
Johnny Darter, *Boleosoma nigrum*	XC
Lake Carp, *Carpiodes thompsoni*	XV
Large-mouthed Black Bass, *Micropterus salmoides*	LXXXI
Least Darter, *Microperca punctulata*	XCIX
Lepomis miniatus	LXXV
Little Pickerel, *Esox vermiculatus*	LXI
Log-perch, *Percina caprodes*	LXXXV
Long-cared Sunfish, *Lepomis megalotis*	LXXVI
Long-nosed Gar, *Lepisosteus osseus*	V
Menona Top-minnow, *Fundulus diaphanus menona*	LXIII
Mongrel Buffalo, *Ictiobus urus*	X
Mud-cat, *Leptops olivaris*	LVI
Mud-minnow, *Umbra limi*	LX

	Map No.
Notropis cayuga	XXXIII
Notropis gilberti	XXXVI
Notropis heterodon	XXXIV
Notropis illecebrosus	XXXVII
Notropis jejunus	XLII
Opsopœodus emiliæ	XXX
Orange-spotted Sunfish, *Lepomis humilis*	LXXVII
Pirate-perch, *Aphredoderus sayanus*	LXIX
Pumpkinseed, *Eupomotis gibbosus*	LXXIX
Quillback, *Carpiodes velifer*	XIV
Rainbow Darter, *Etheostoma cœruleum*	XCV
Red-bellied Dace, *Chrosomus erythrogaster*	XXIV
Redfin, *Notropis lutrensis*	XXXIX
Red-mouth Buffalo, *Ictiobus cyprinella*	IX
River Chub, *Hybopsis kentuckiensis*	LI
Rock Bass, *Ambloplites rupestris*	LXXIII
Rosy-faced Minnow, *Notropis rubrifrons*	XLIV
Round Sunfish, *Centrarchus macropterus*	LXXII
Sand Darter, *Ammocrypta pellucida*	XCII
Sheepshead, *Aplodinotus grunniens*	CII
Shiner, *Notropis atherinoides*	XLIII
Short-headed Red-horse, *Moxostoma breviceps*	XXII
Short-nosed Gar, *Lepisosteus platostomus*	VI
Silver-mouthed Minnow, *Ericymba buccata*	XLVI
Silvery Minnow, *Hybognathus nuchalis*	XXV
Small-mouth Buffalo, *Ictiobus bubalus*	XI
Small-mouthed Black Bass, *Micropterus dolomieu*	LXXX
Speckled Bullhead, *Ameiurus nebulosus*	LIV
Spot-tailed Minnow, *Notropis hudsonius*	XXXVIII
Spotted Shiner, *Hybopsis dissimilis*	XLVIII
Spotted Sucker, *Minytrema melanops*	XVII
Steel-colored Minnow, *Notropis whipplii*	XL
Stonecat, *Noturus flavus*	LVII
Stone-roller, *Campostoma anomalum*	XXIII
Storer's Chub, *Hybopsis storerianus*	L
Straw-colored Minnow, *Notropis blennius*	XXXV
Sucker-mouthed Minnow, *Phenacobius mirabilis*	XLVII
Tadpole Cat, *Schilbeodes gyrinus*	LVIII
Top-minnow, *Fundulus notatus*	LXV
Trout-perch, *Percopsis guttatus*	LXVII
Viviparous Top-minnow, *Gambusia affinis*	LXVI
Wall-eyed Pike, *Stizostedion vitreum*	LXXXII
Warmouth Bass, *Chænobryttus gulosus*	LXXIV
White Bass, *Roccus chrysops*	C
White Crappie, *Pomoxix annularis*	LXX
White-nosed Sucker, *Moxostoma anisurum*	XX
Yellow Bass, *Morone interrupta*	CI
Yellow Bullhead, *Ameiurus natalis*	LIII
Yellow Perch, *Perca flavescens*	LXXXIV

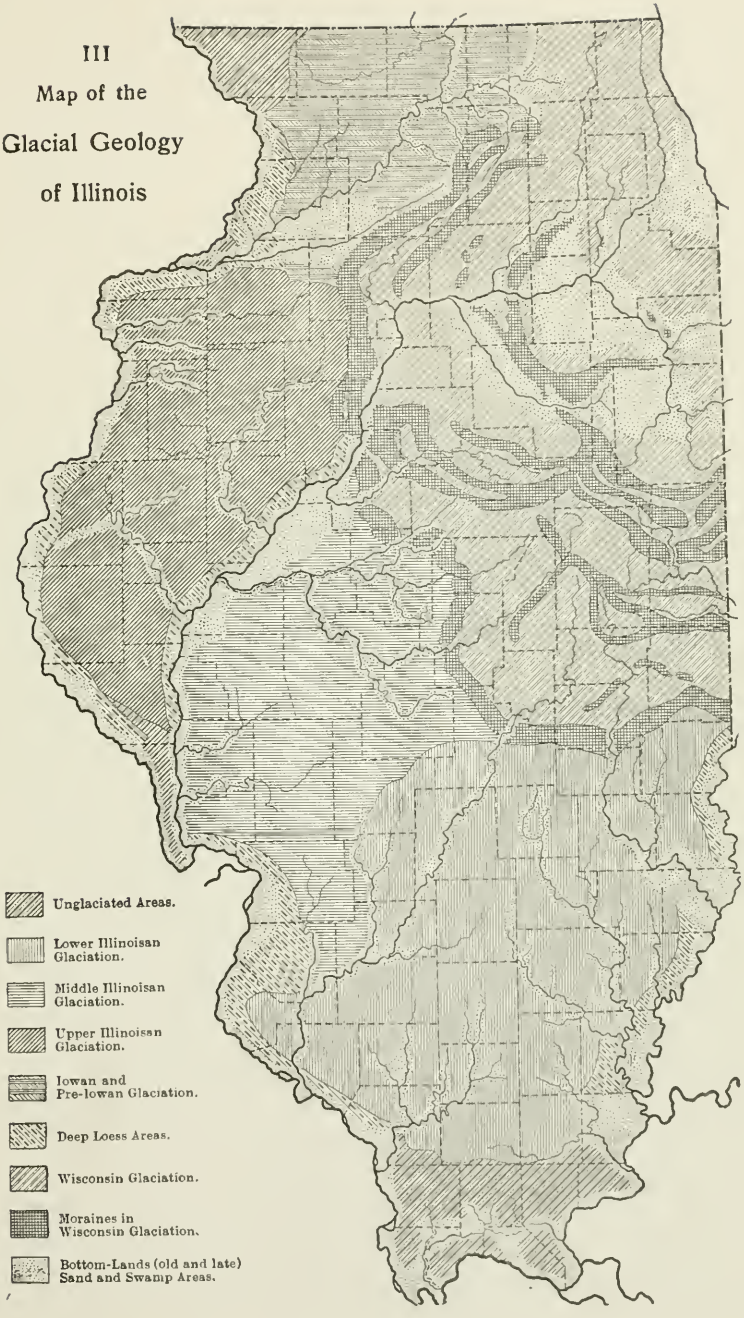

I & II
Stream systems
and
Sections of
Illinois
I
II
III
IV
V
VI
VII
VIII
IX
X
Rock R.
Green R.
Des Plaines R.
Kankakee R.
Vermilion R.
Spoon R.
Illinois R.
Mackinaw R.
Big Vermilion R.
Sangamon R.
MISSISSIPPI RIVER
Kaskaskia R.
Big Muddy R.
Embarras R.
Wabash R.
Saline R.
OHIO RIVER
.....Ill. and Mich. Canal
.....Ill. and Miss. Canal
.....Drainage Canal
. County Seat

III

Map of the

Glacial Geology

of Illinois



IV

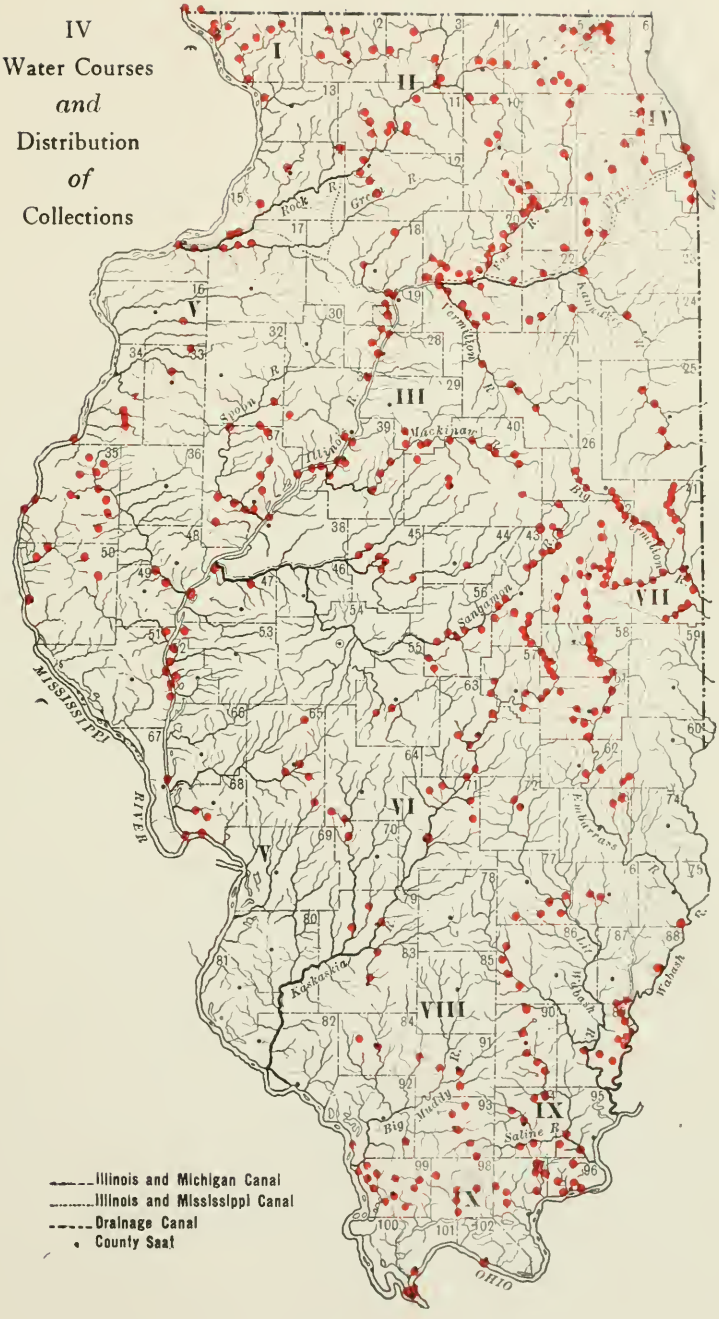
Water Courses

and

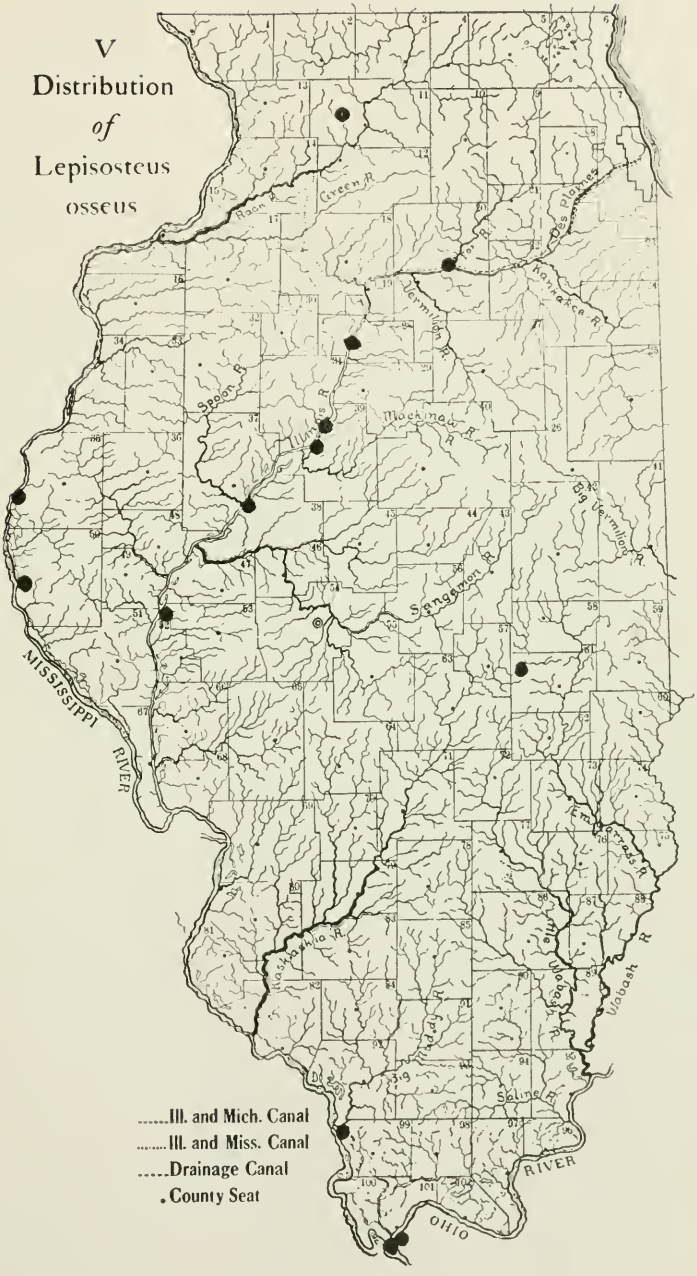
Distribution

of

Collections



V
Distribution
of
Lepisosteus
osseus



VI
Distribution
of
Lepisosteus
platostomus

VII
Distribution
of
Amia
calva
Rock R.
Green R.
Des Plaines R.
Kankakee R.
Vermilion R.
Spoon R.
Illinois R.
Mackinaw R.
Big Vermilion R.
Sangamon R.
MISSISSIPPI RIVER
Kaskaskia R.
Little Wabash R.
Wabash R.
Big Muddy R.
Saline R.
OHIO RIVER
.....Ill. and Mich. Canal
.....Ill. and Miss. Canal
.....Drainage Canal
. County Seat

VIII
Distribution
of
Dorosoma
cepedianum

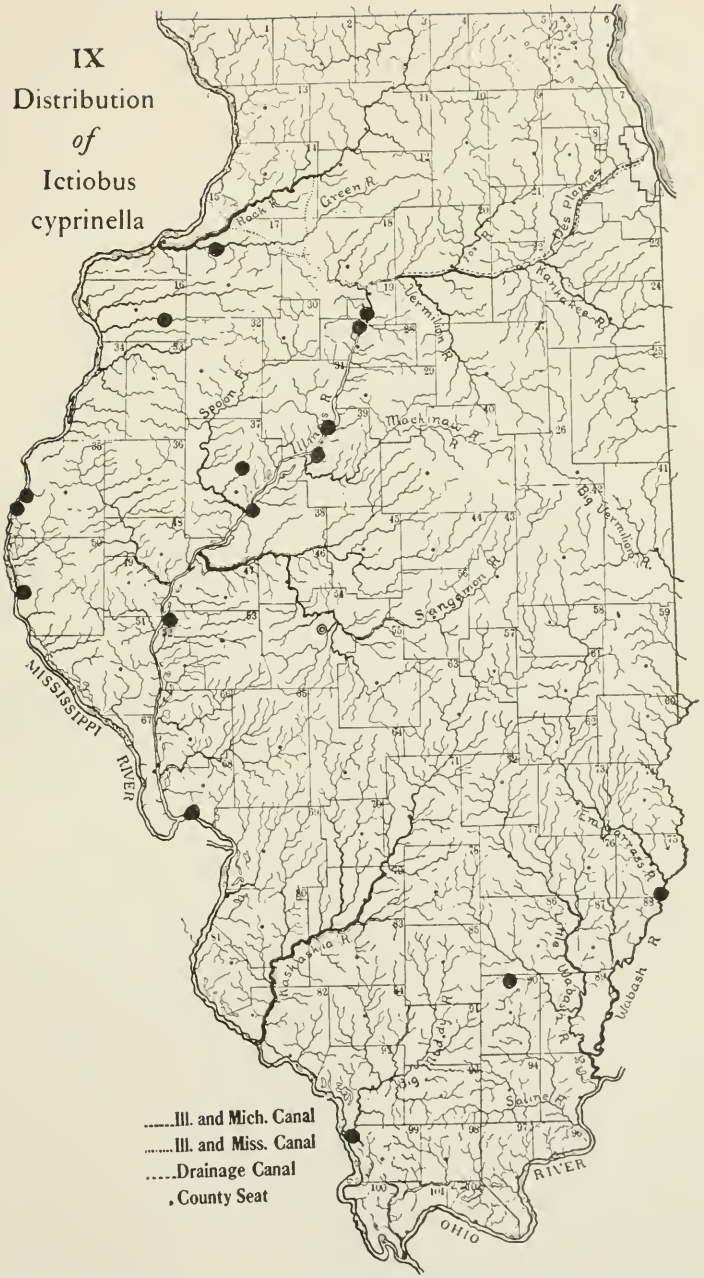
IX

Distribution

of

Ictiobus

cyprinella



X

Distribution *of* Ictiobus urus

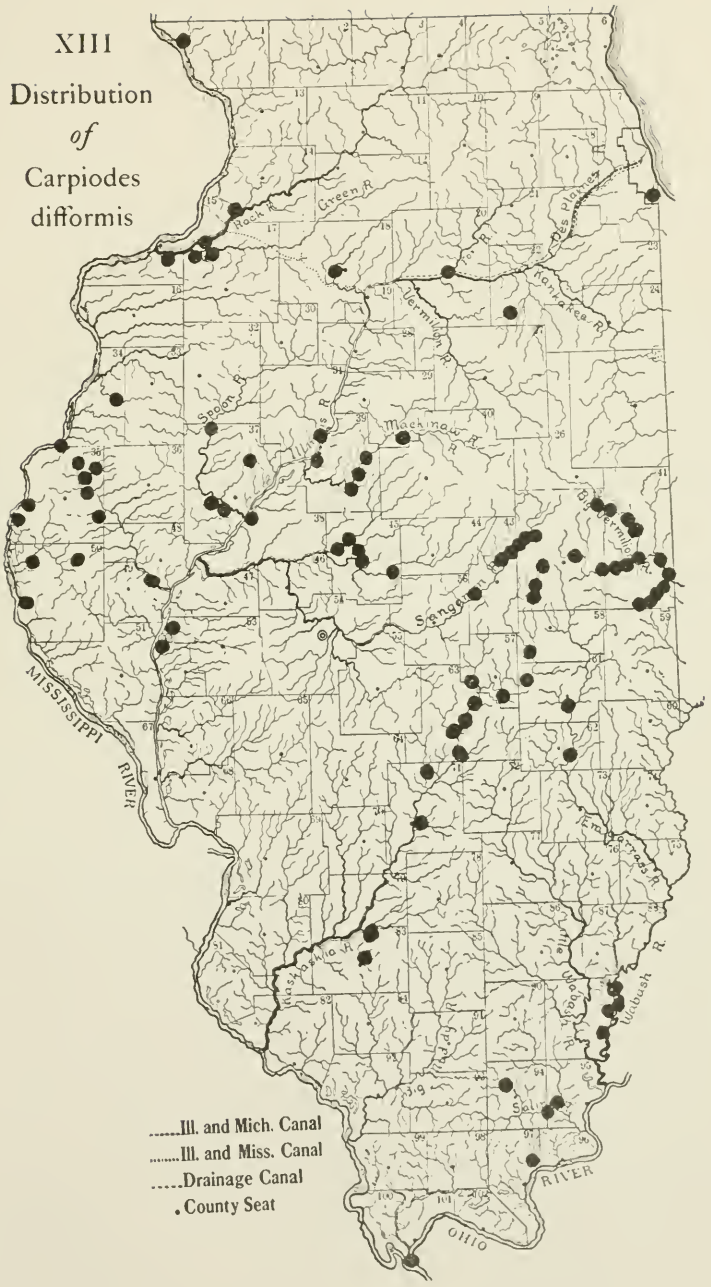
XI

Distribution
of
Ictiobus
bubalus

XII
Distribution
of
Carpiodes
carpio

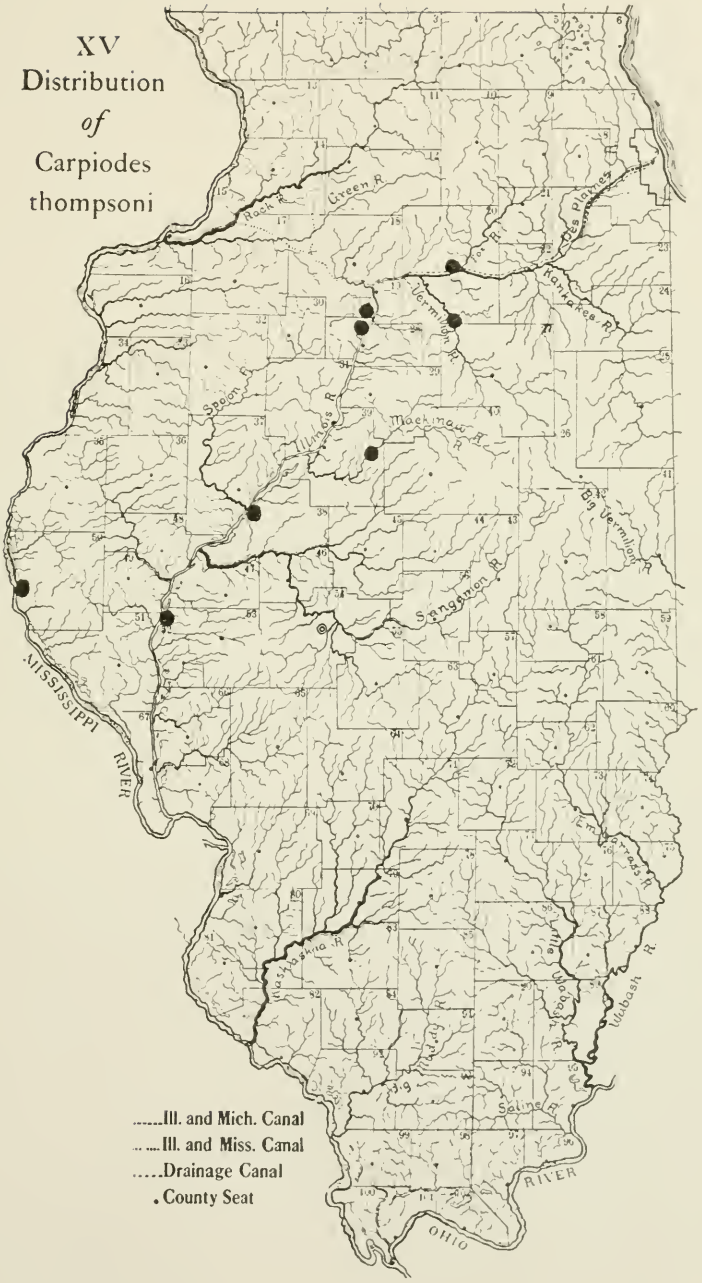
XIII

Distribution *of* Carpiodes difformis



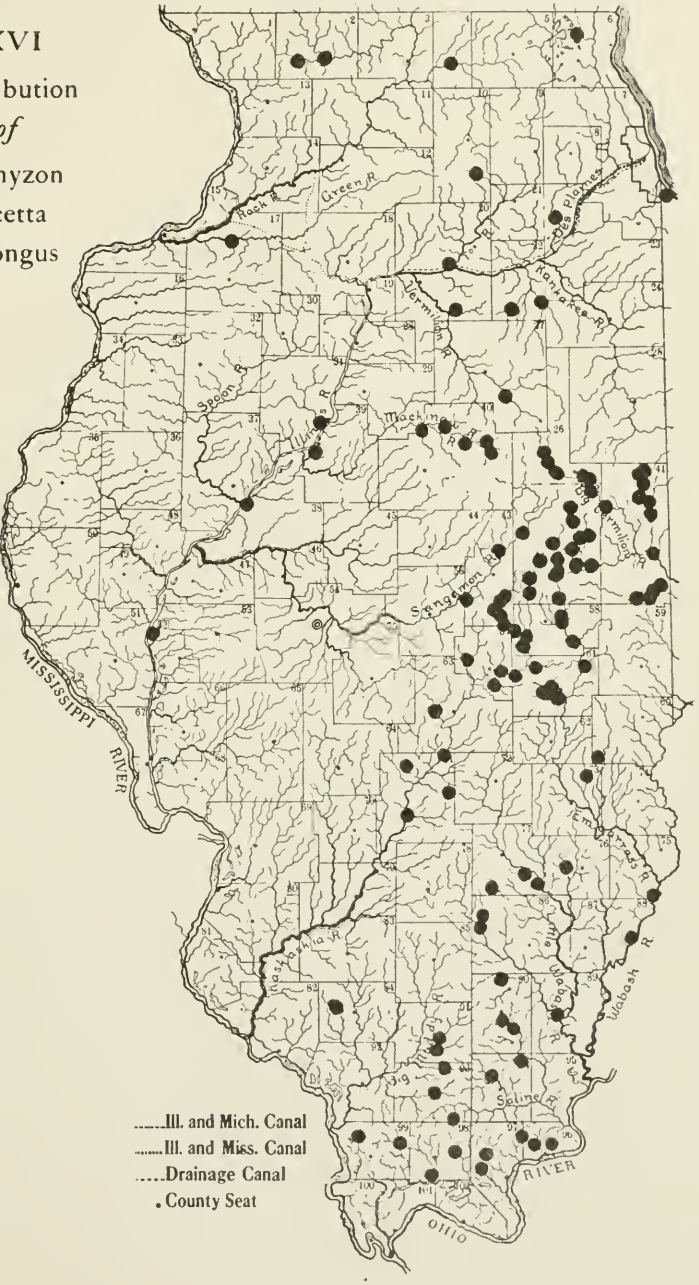
XIV
Distribution
of
Carpiodes
velifer

XV
Distribution
of
Carpiodes
thompsoni



XVI

Distribution *of* Erimyzon sucetta oblongus



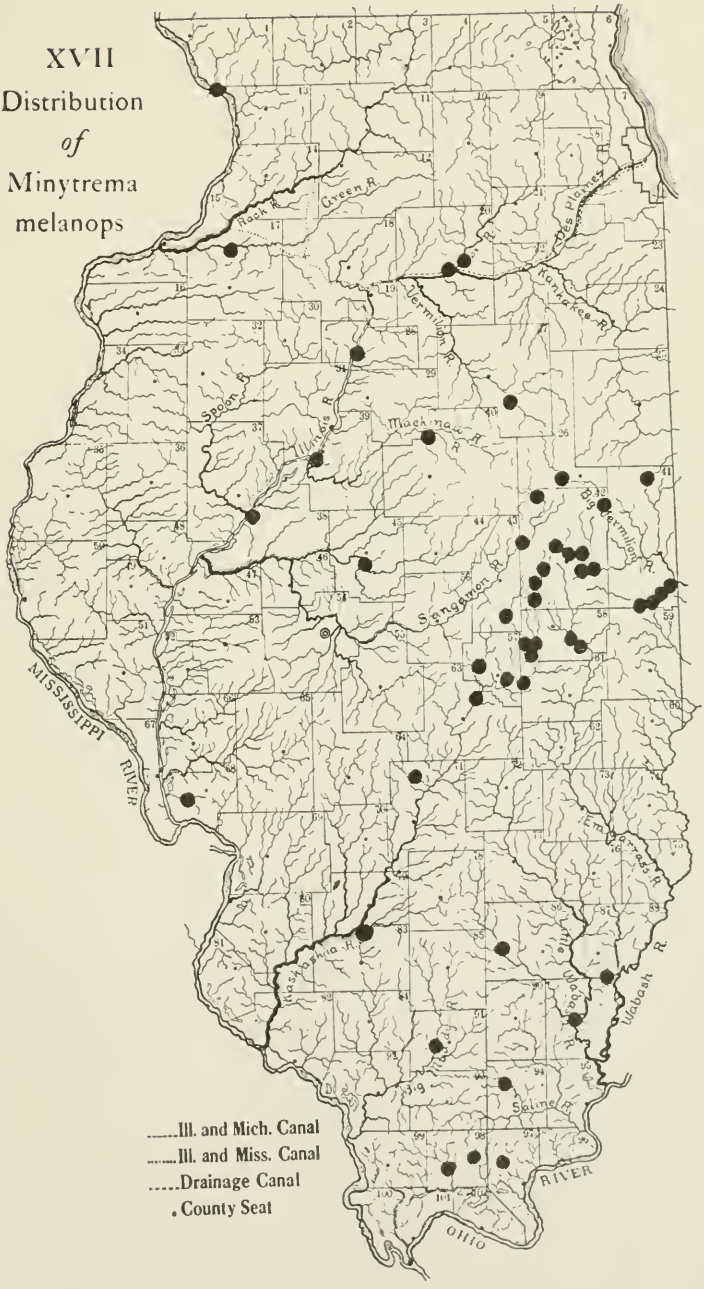
XVII

Distribution

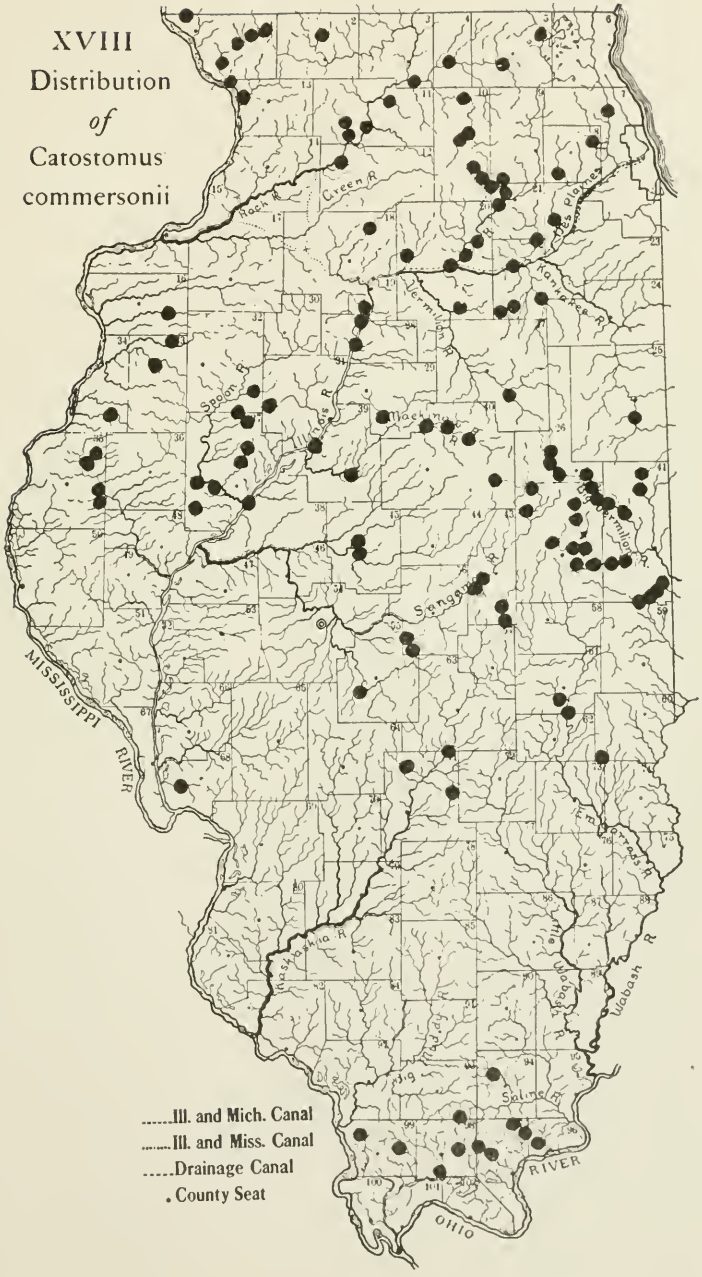
of

Minytrema

melanops



XVIII
Distribution
of
Catostomus
commersonii



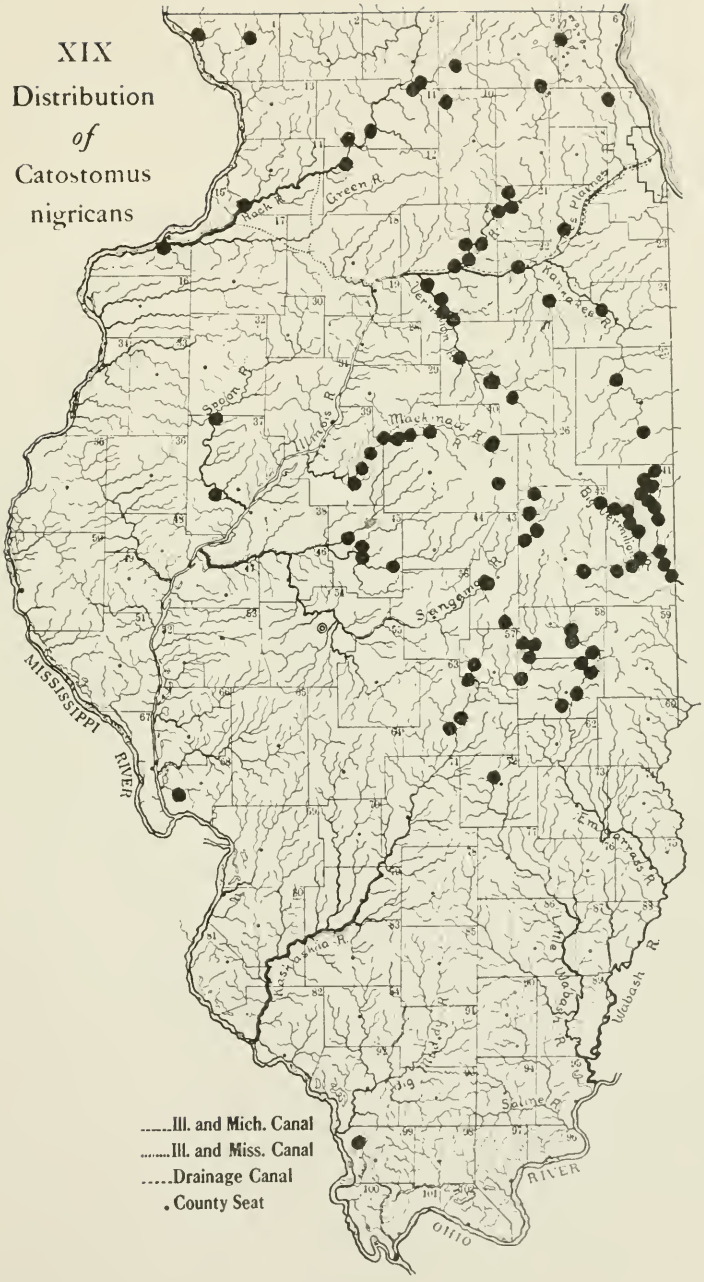
XIX

Distribution

of

Catostomus

nigricans



XX

Distribution

of

Moxostoma

anisurum

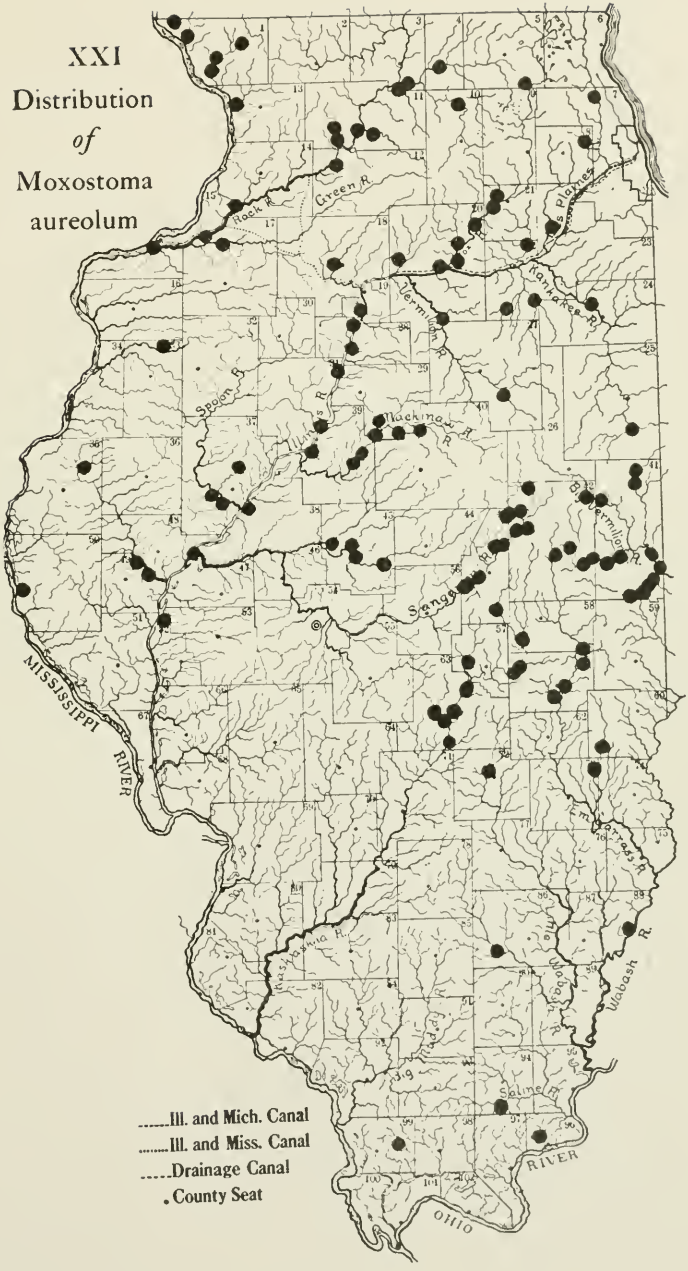
XXI

Distribution

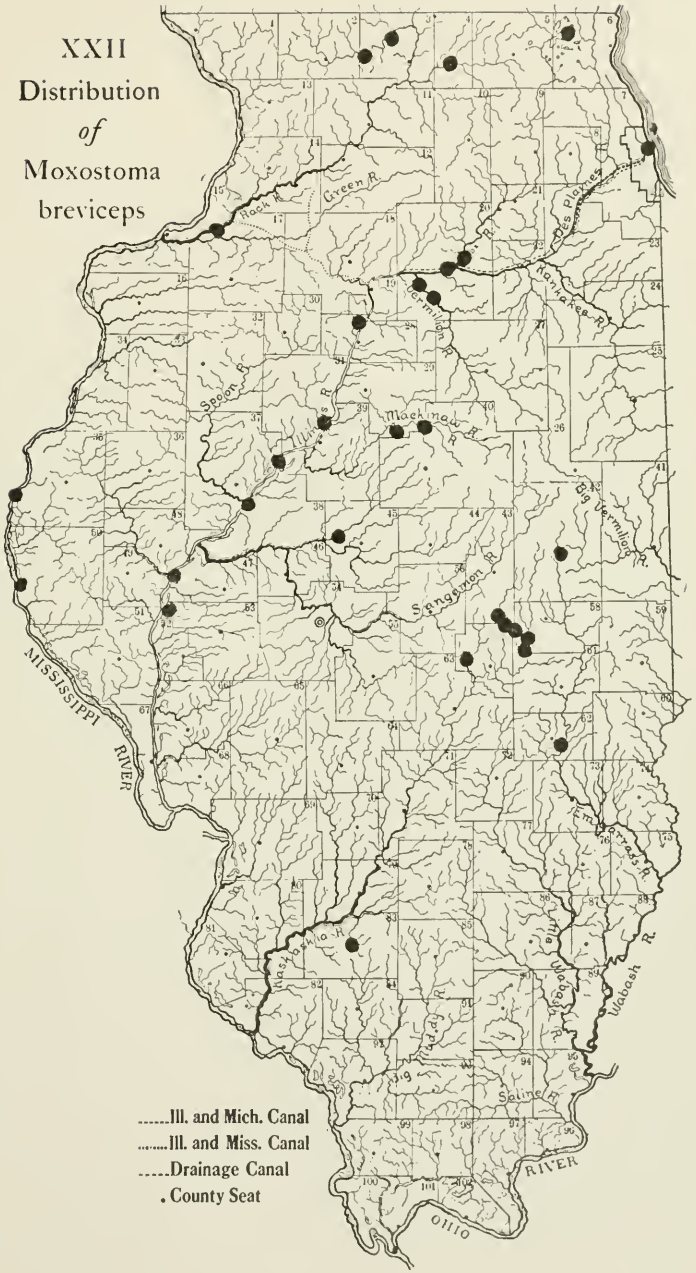
of

Moxostoma

aureolum



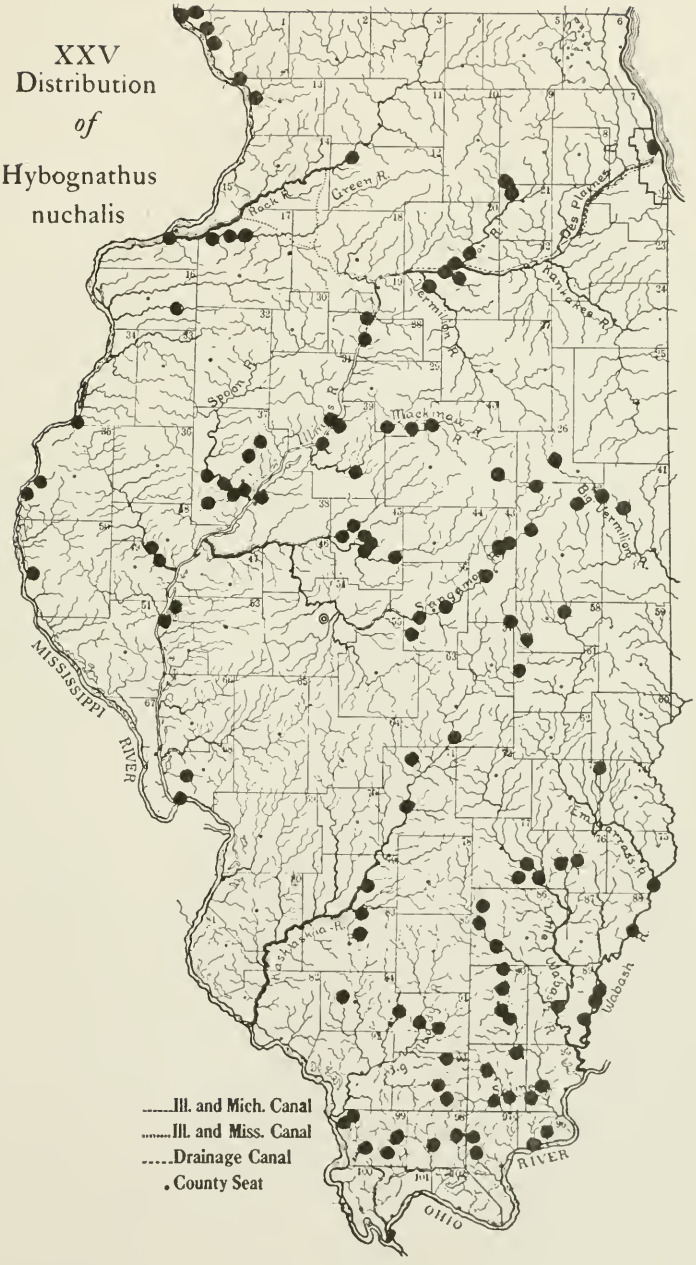
XXII
Distribution
of
Moxostoma
breviceps



XXIII
Distribution
of
Campostoma
anomalum

XXIV
Distribution
of
Chrosomus
erythrogaster

XXV
Distribution
of
Hybognathus
nuchalis



XXVI

Distribution

of

Hybognathus

nubila

XXVII
Distribution
of
Pimephales
promelas

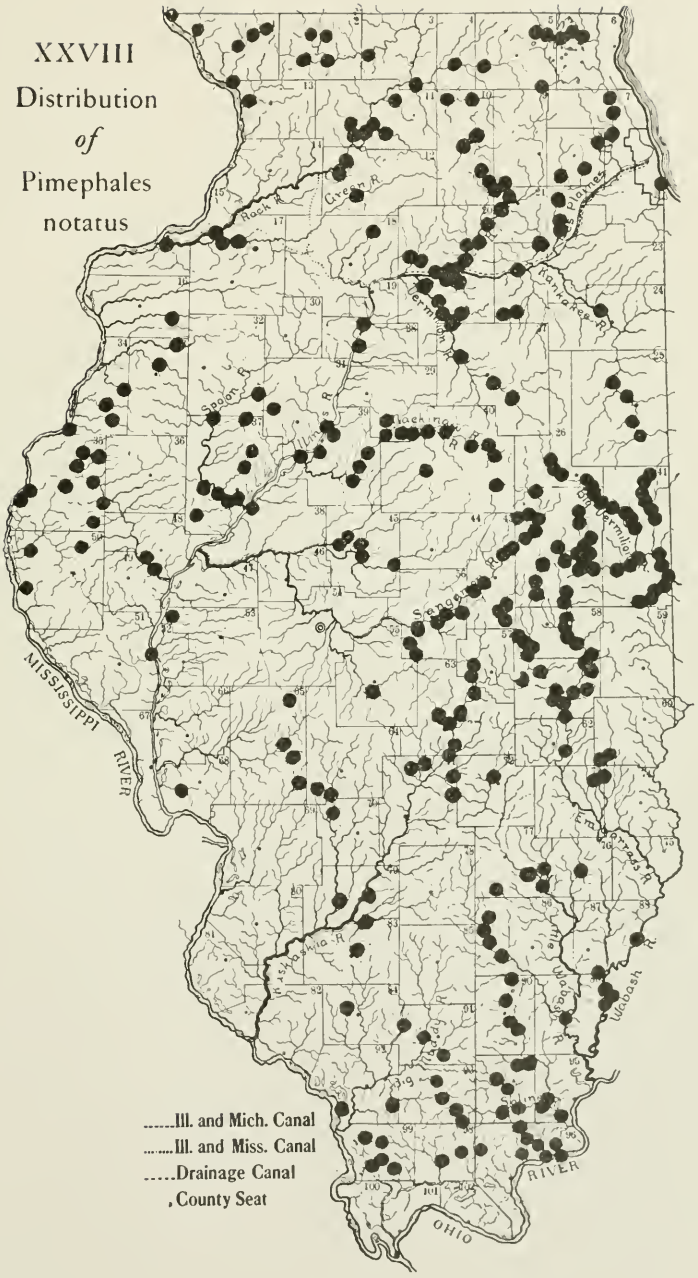
XXVIII

Distribution

of

Pimephales

notatus



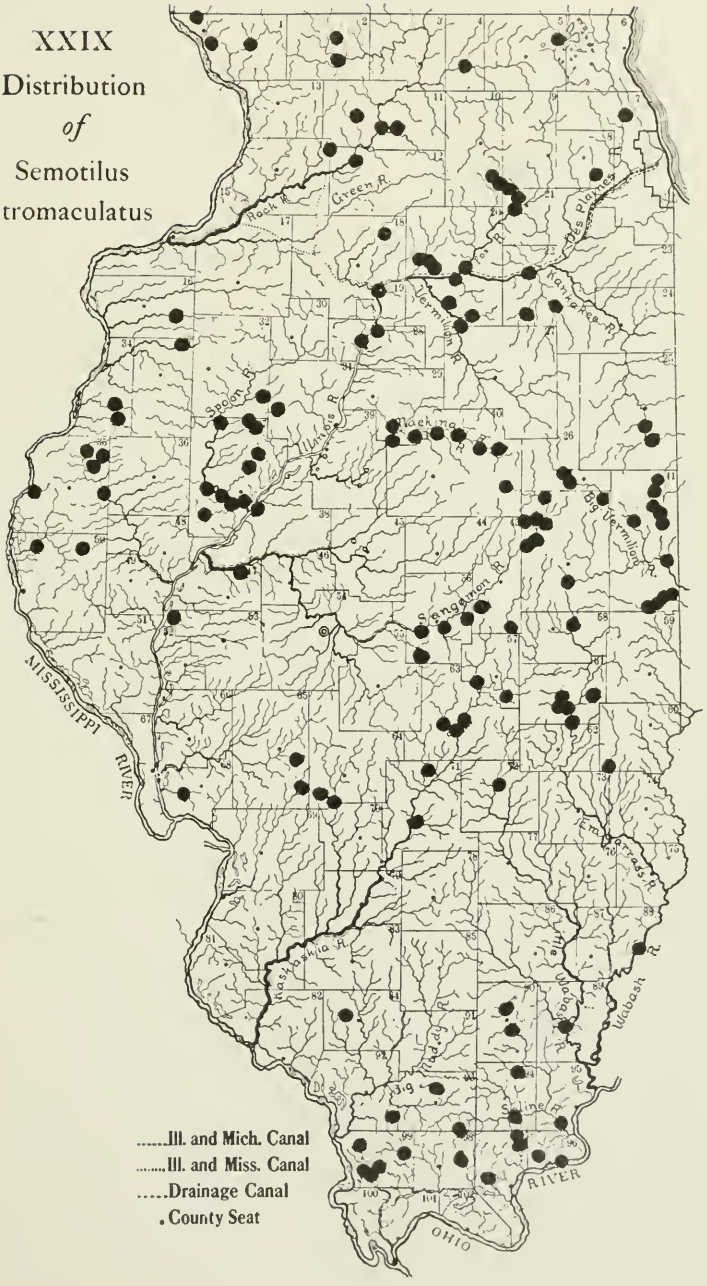
XXIX

Distribution

of

Semotilus

atromaculatus



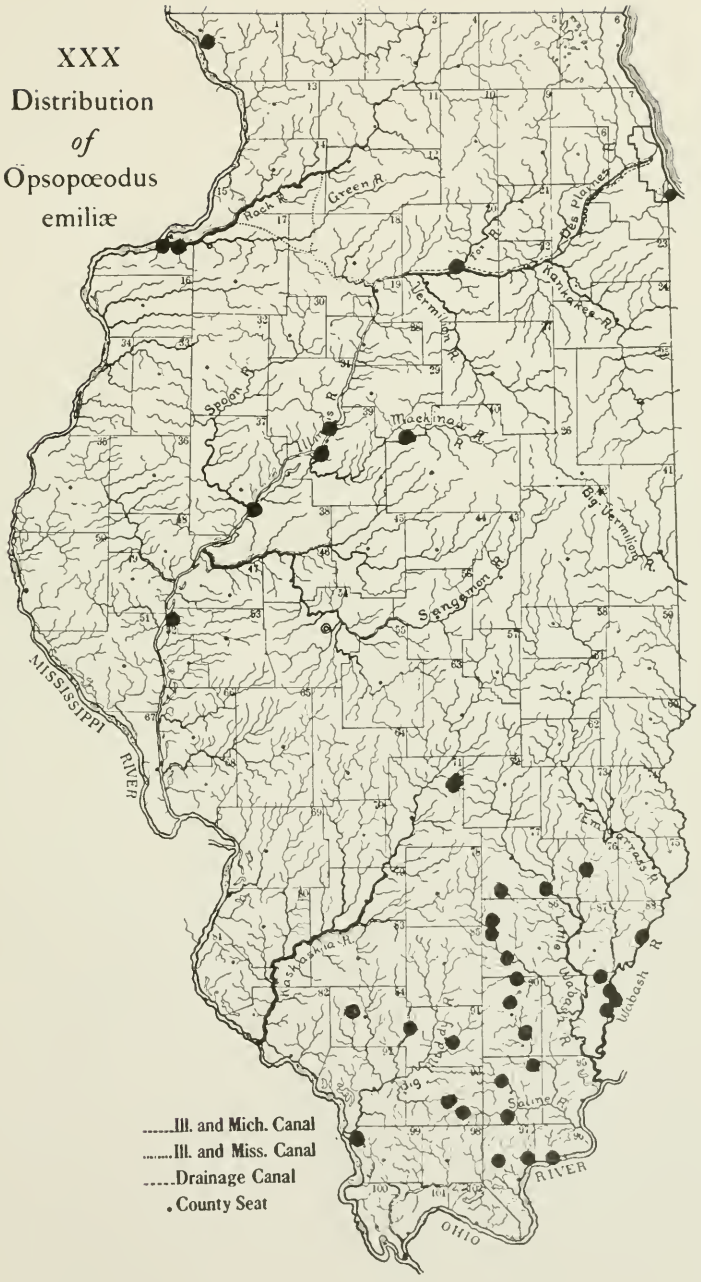
XXX

Distribution

of

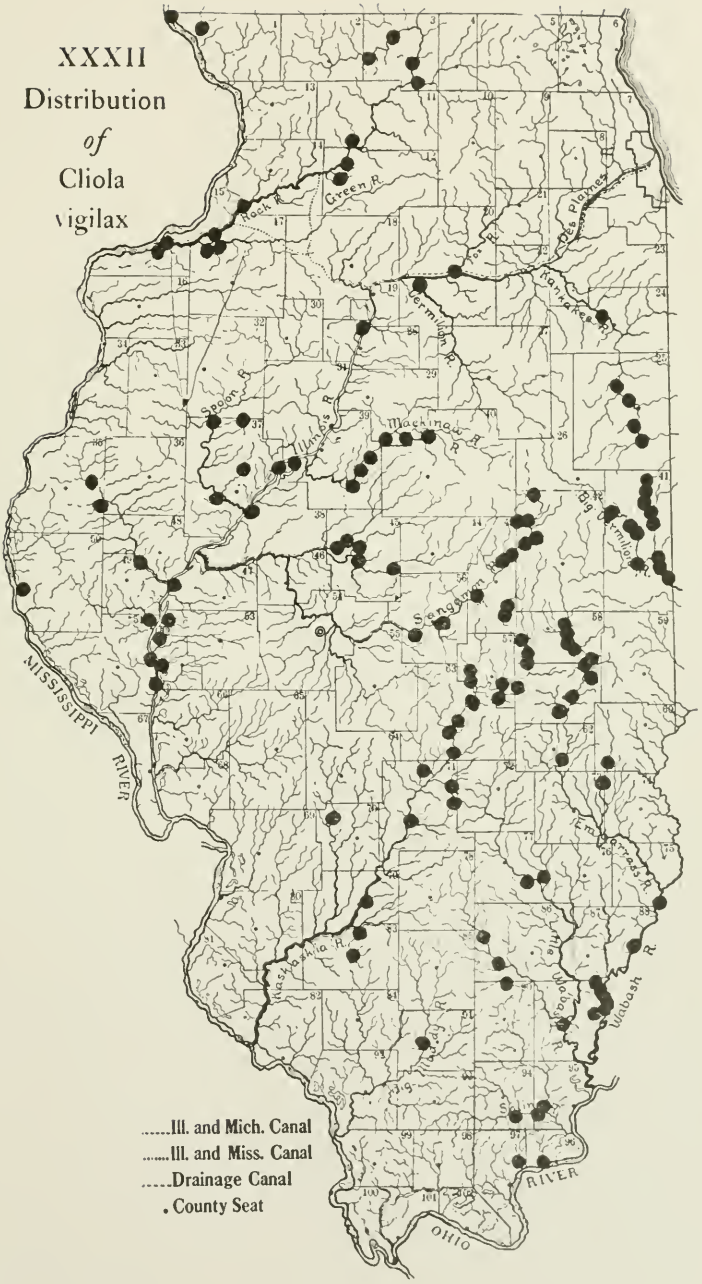
Opsopœodus

emiliæ

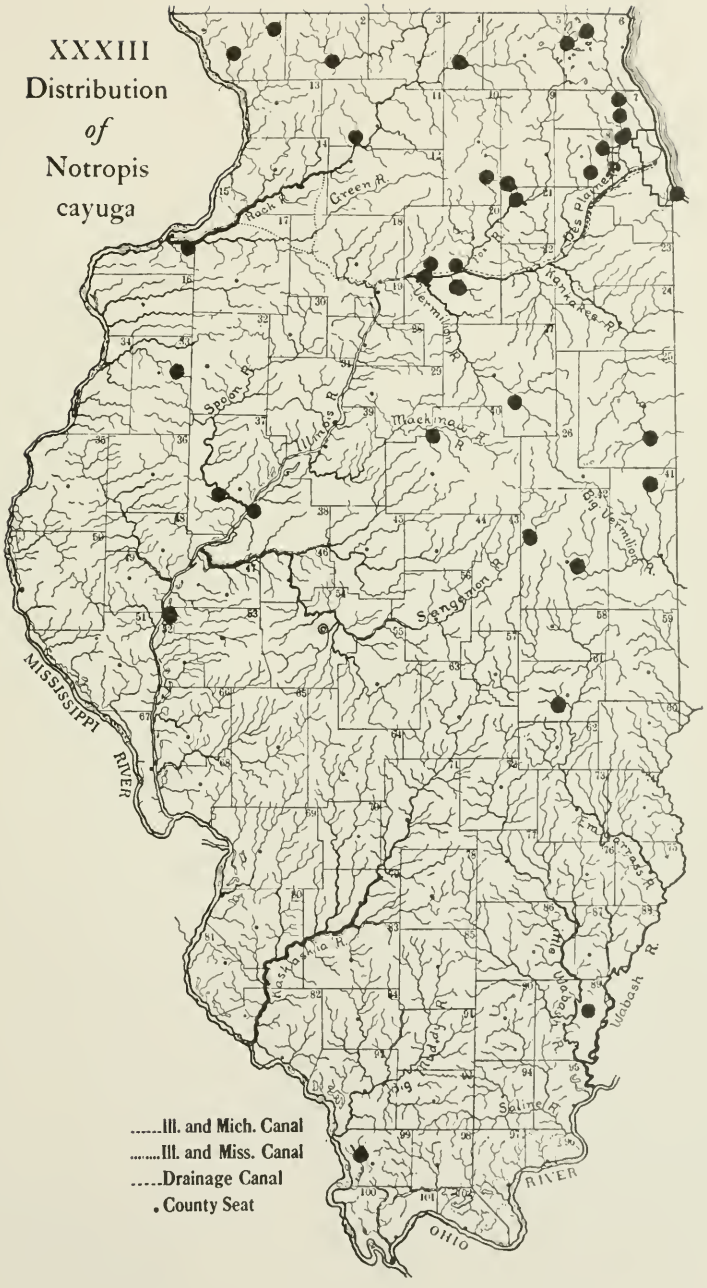


XXXI
Distribution
of
Abrami's
crysoleucas
Ill. and Mich. Canal
Ill. and Miss. Canal
Drainage Canal
County Seat

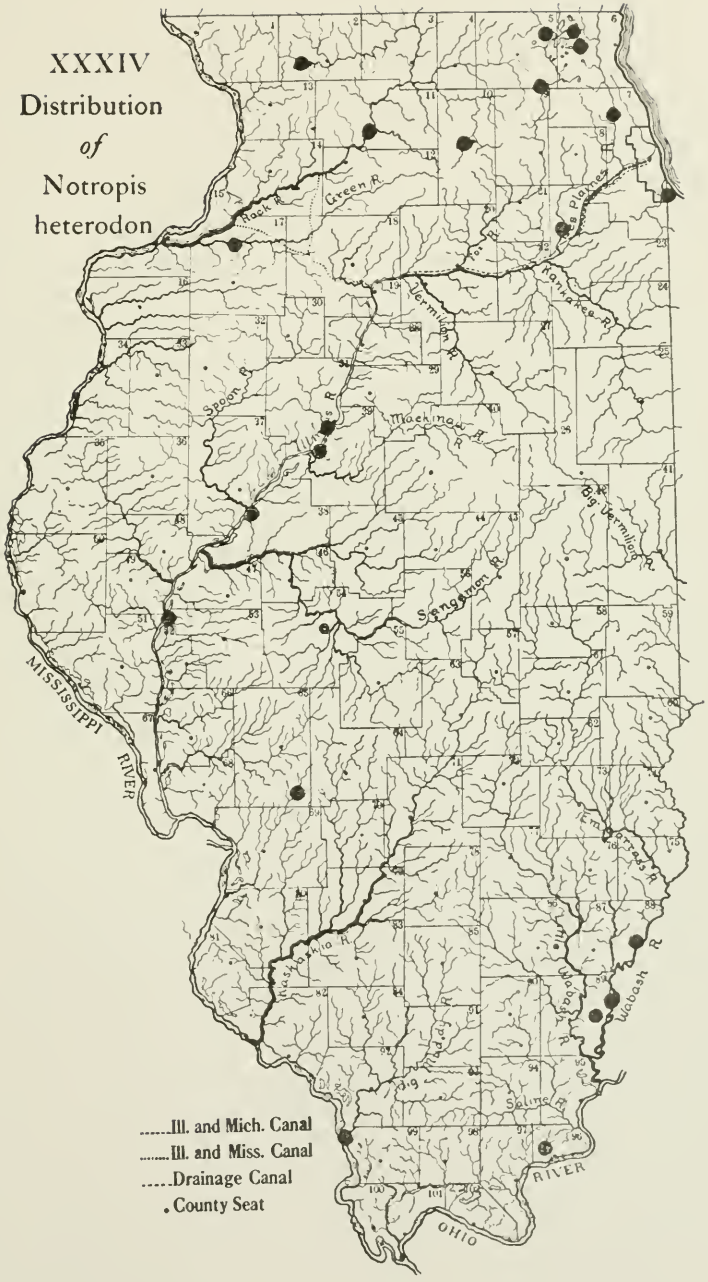
XXXII
Distribution
of
Cliola
vigilax

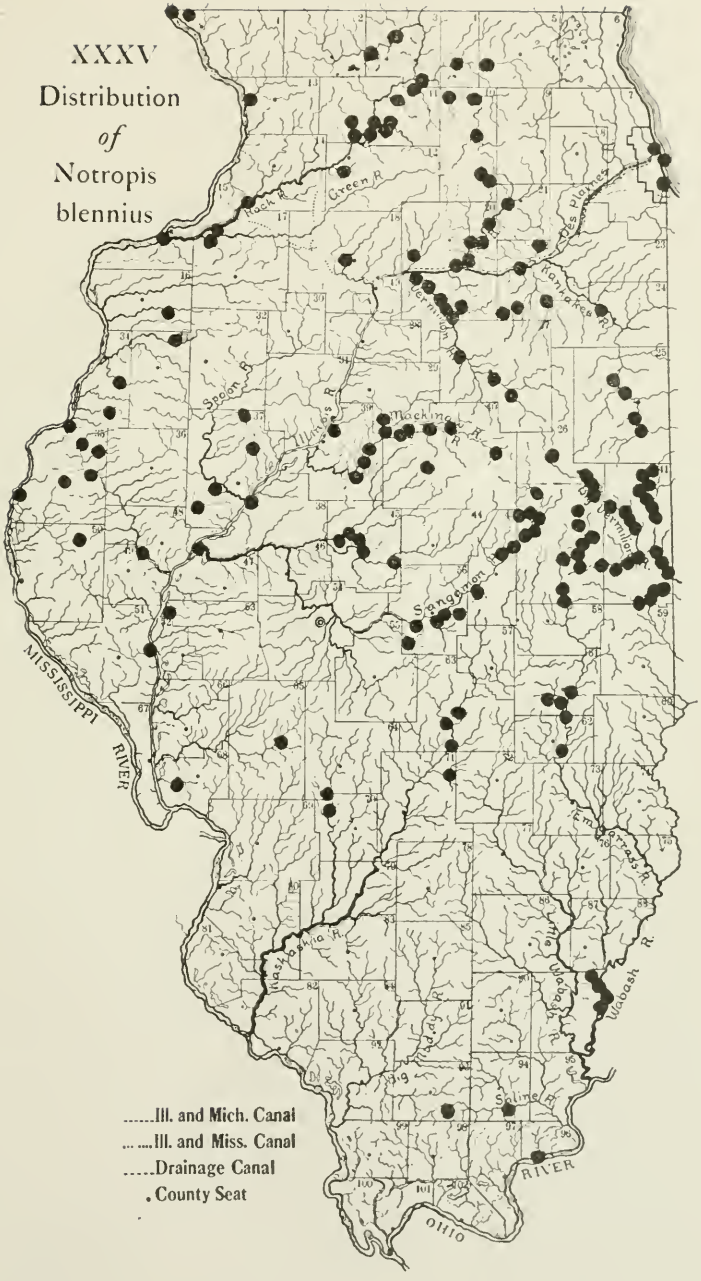


XXXIII
Distribution
of
Notropis
cayuga



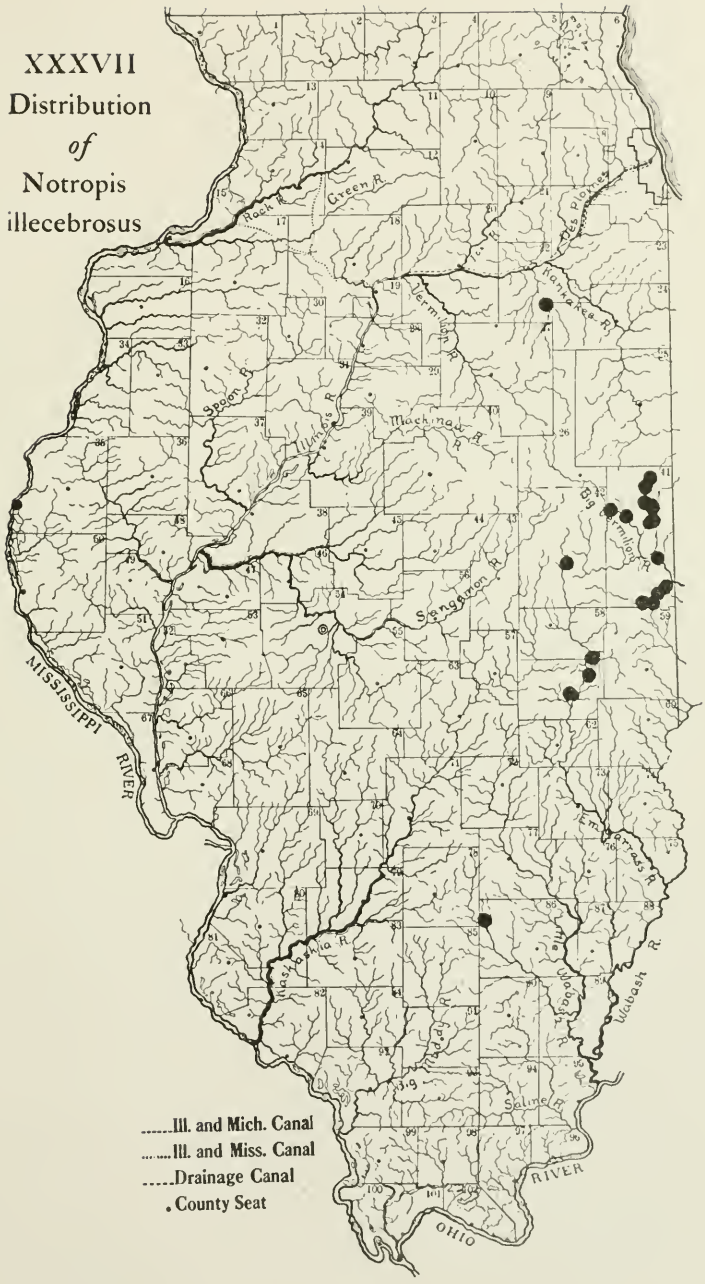
XXXIV
Distribution
of
Notropis
heterodon




XXXV
Distribution
of
Notropis
blennius
Green R.
Illinois R.
Mackinaw R.
Sangamon R.
Embarras R.
Wabash R.
Little Wabash R.
Saline R.
MISSISSIPPI RIVER
OHIO RIVER
.....Ill. and Mich. Canal
.....Ill. and Miss. Canal
.....Drainage Canal
. County Seat

XXXVI
Distribution
of
Notropis
gilberti

XXXVII
Distribution
of
Notropis
illecebrosus



XXXVIII
Distribution
of
Notropis
hudsonius

XXXIX

Distribution

of

Notropis

lutrensis

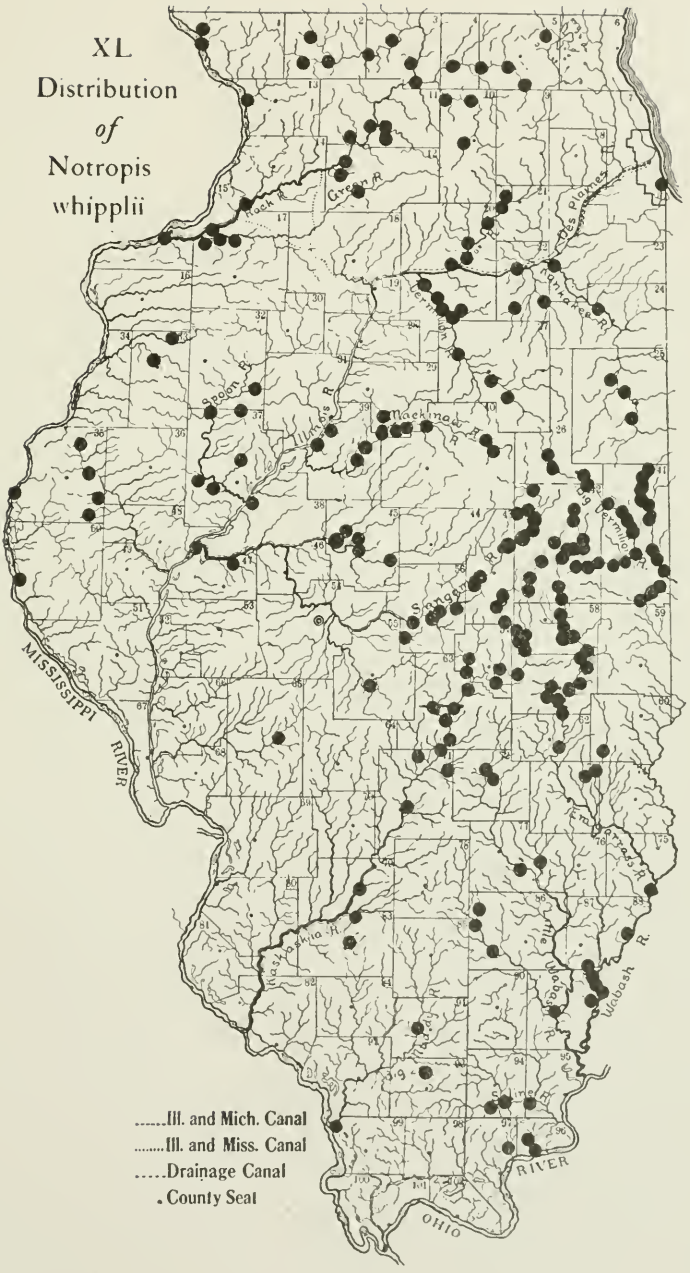
XL

Distribution

of

Notropis

whipplii



XLI
Distribution
of
Notropis
cornutus

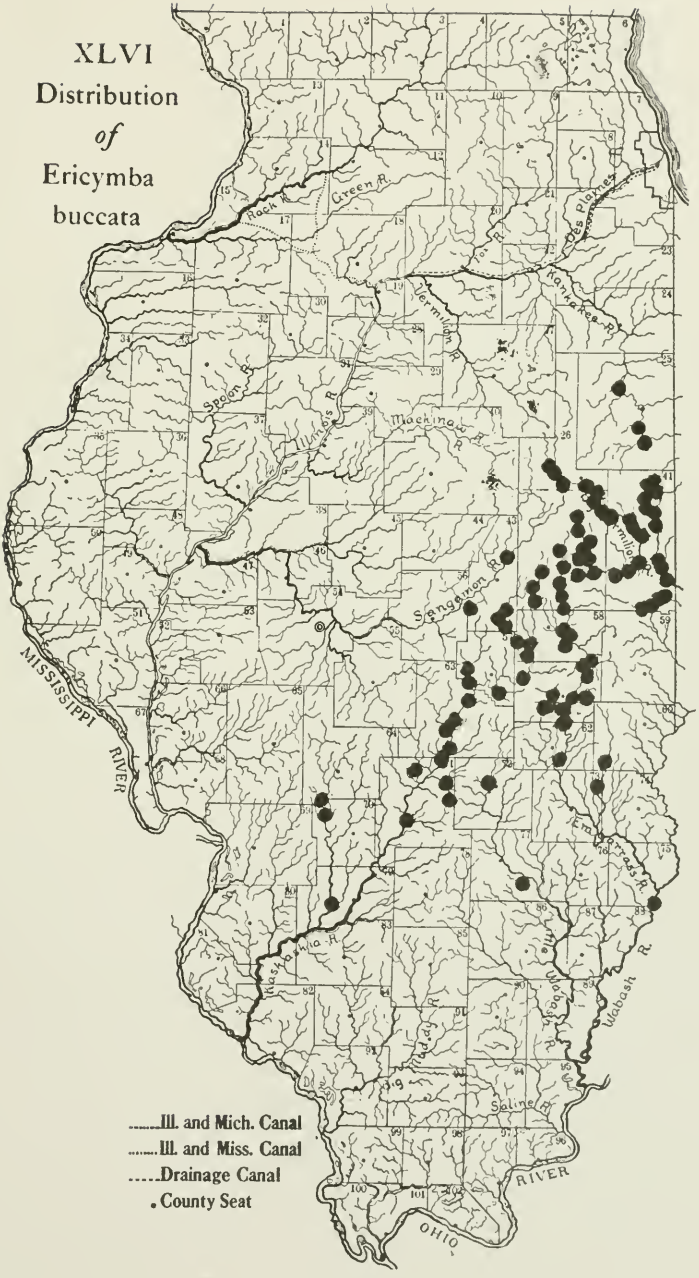
XLII
Distribution
of
Notropis
jejunus

XLIII
Distribution
of
Necrophorus
americanus

XLIV
Distribution
of
Notropis
rubrifrons

XLV
Distribution
of
Notropis
umbratilis
atripes

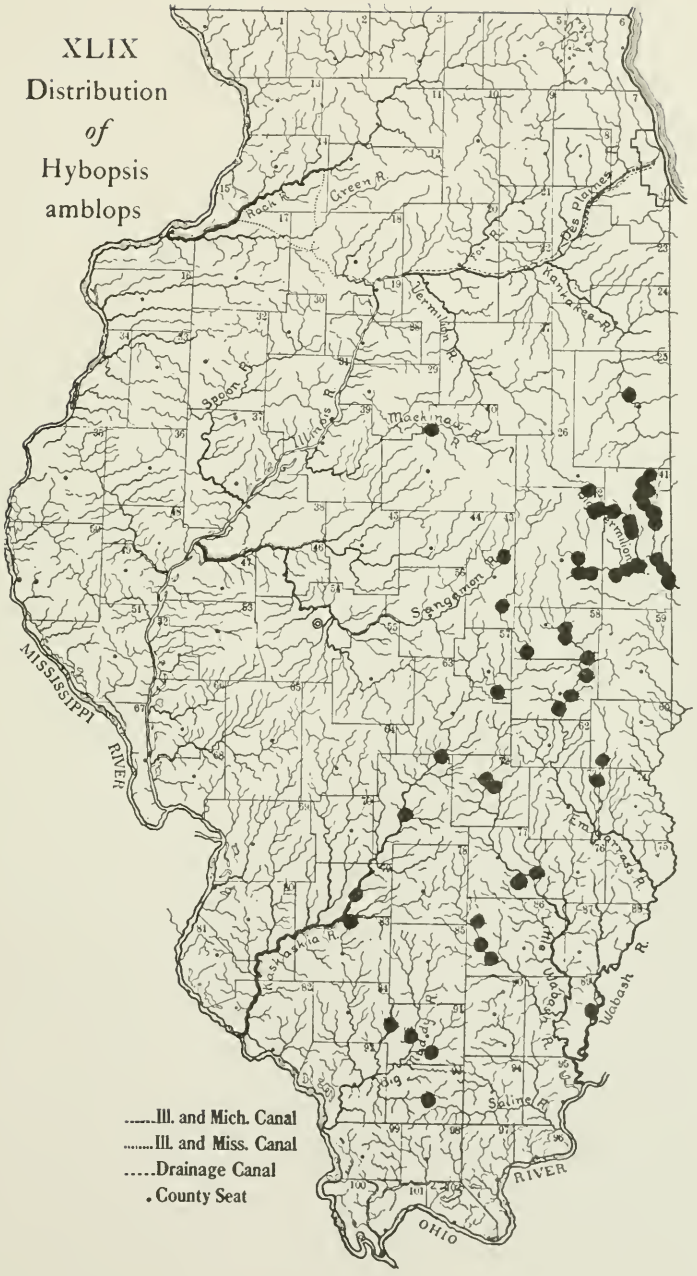
XLVI
Distribution
of
Ericymba
buccata



XLVII
Distribution
of
Phenacobius
mirabilis.

XLVIII
Distribution
of
Hybopsis
dissimilis

XLIX
Distribution
of
Hybopsis
amblops



L

Distribution of Hybopsis storerianus

LI

Distribution *of* Hybopsis kentuckiensis

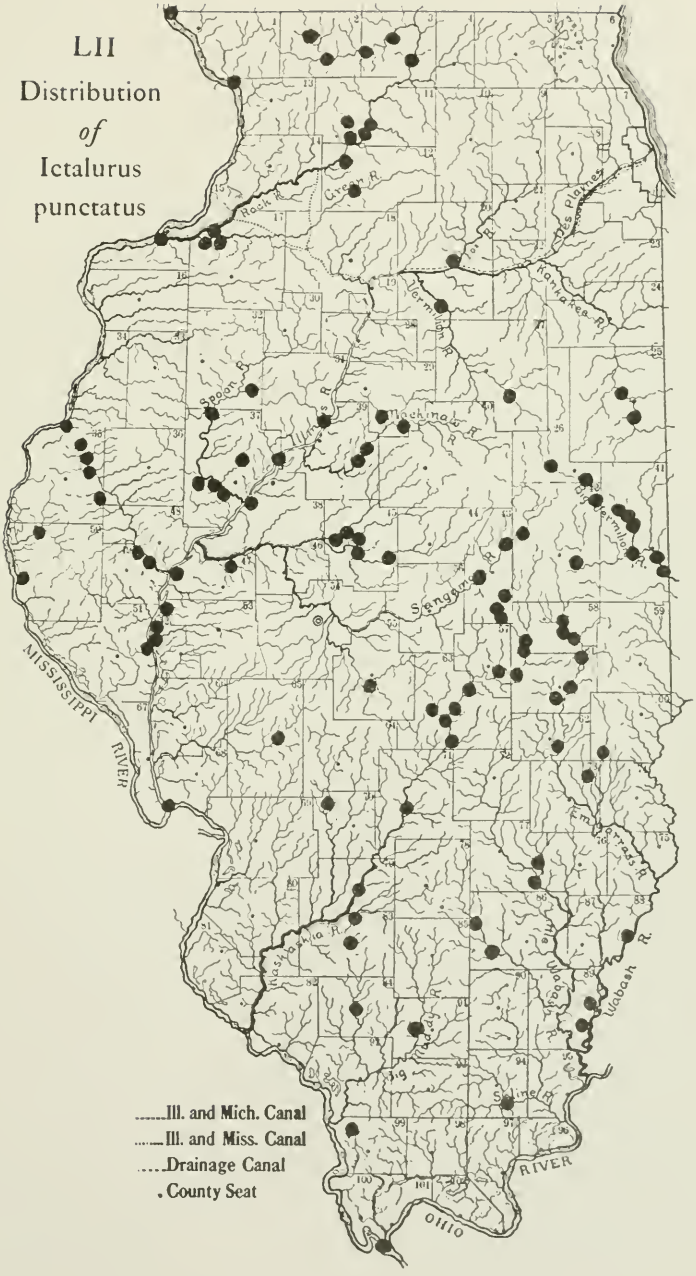
LII

Distribution

of

Ictalurus

punctatus



LIII
Distribution
of
Ameiurus
natalis

LIV
Distribution
of
Ameiurus
nebulosus

LV

Distribution

of

Ameiurus

melas

LVI
Distribution
of
Leptops
olivaris

LVII

Distribution

of

Noturus

flavus

LVIII

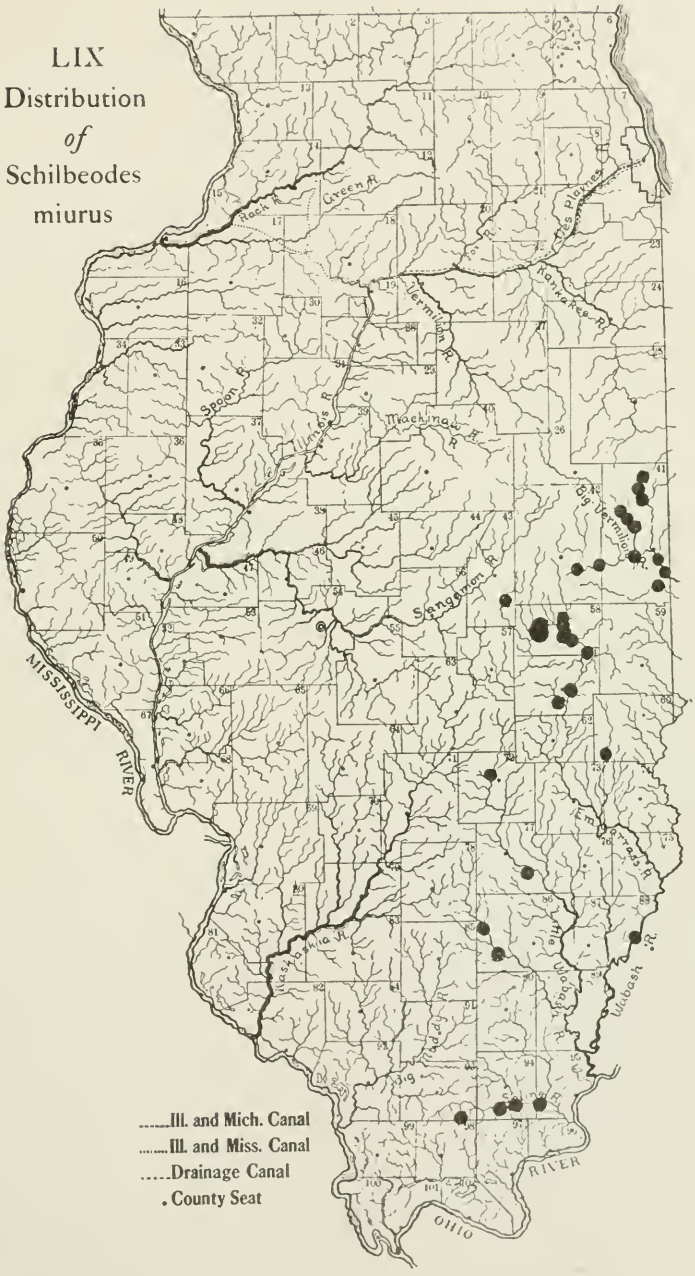
Distribution

of

Schilbeodes

gyrinus

LIX
Distribution
of
Schilbeodes
miurus



LX

Distribution

of

Umbra

limi

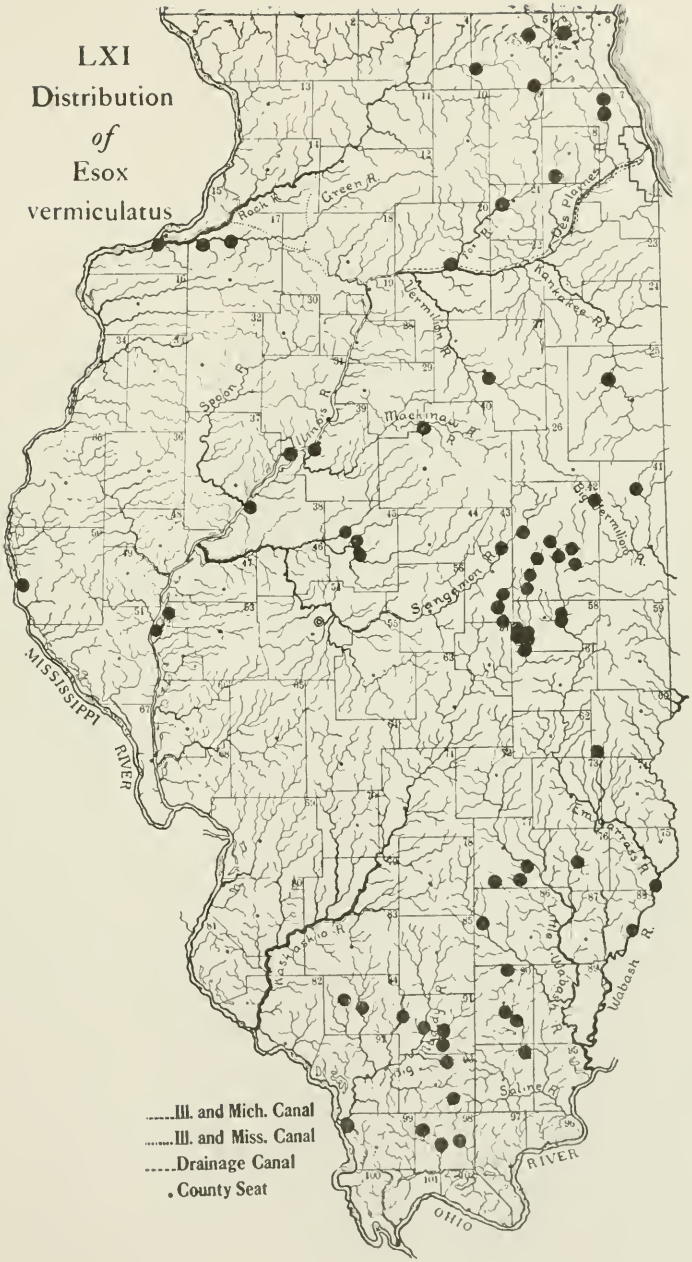
LXI

Distribution

of

Esox

vermiculatus

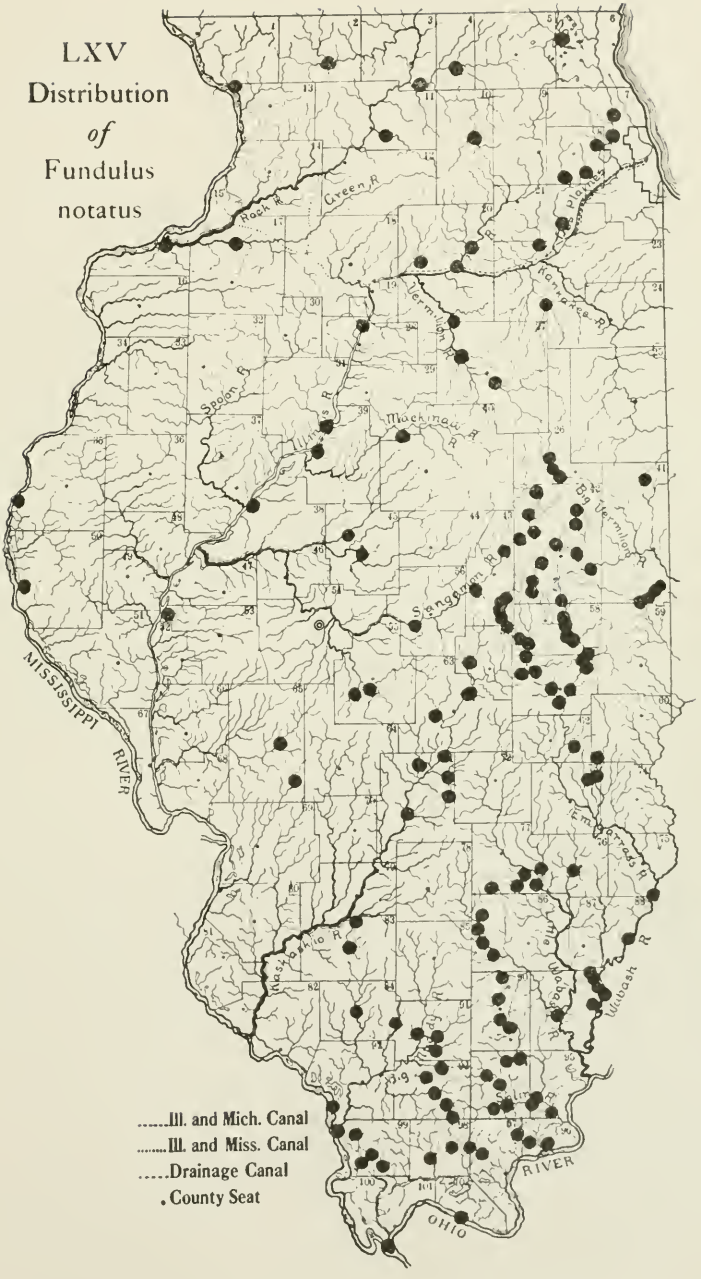


LXII
Distribution
of
Esox
lucius
Rock R.
Green R.
Des Plaines R.
Kankakee R.
Vermilion R.
Spoon R.
Illinois R.
Mackinaw R.
Big Vermilion R.
Sangamon R.
MISSISSIPPI RIVER
Kaskaskia R.
Wabash R.
Embarras R.
Little Wabash R.
Big Muddy R.
Saline R.
OHIO RIVER
.....Ill. and Mich. Canal
.....Ill. and Miss. Canal
.....Drainage Canal
. County Seat

LXIII
Distribution
of
Fundulus
diaphanus
menona

LXIV
Distribution
of
Fundulus
dispar

LXV
Distribution
of
Fundulus
notatus



LXVI

Distribution

of

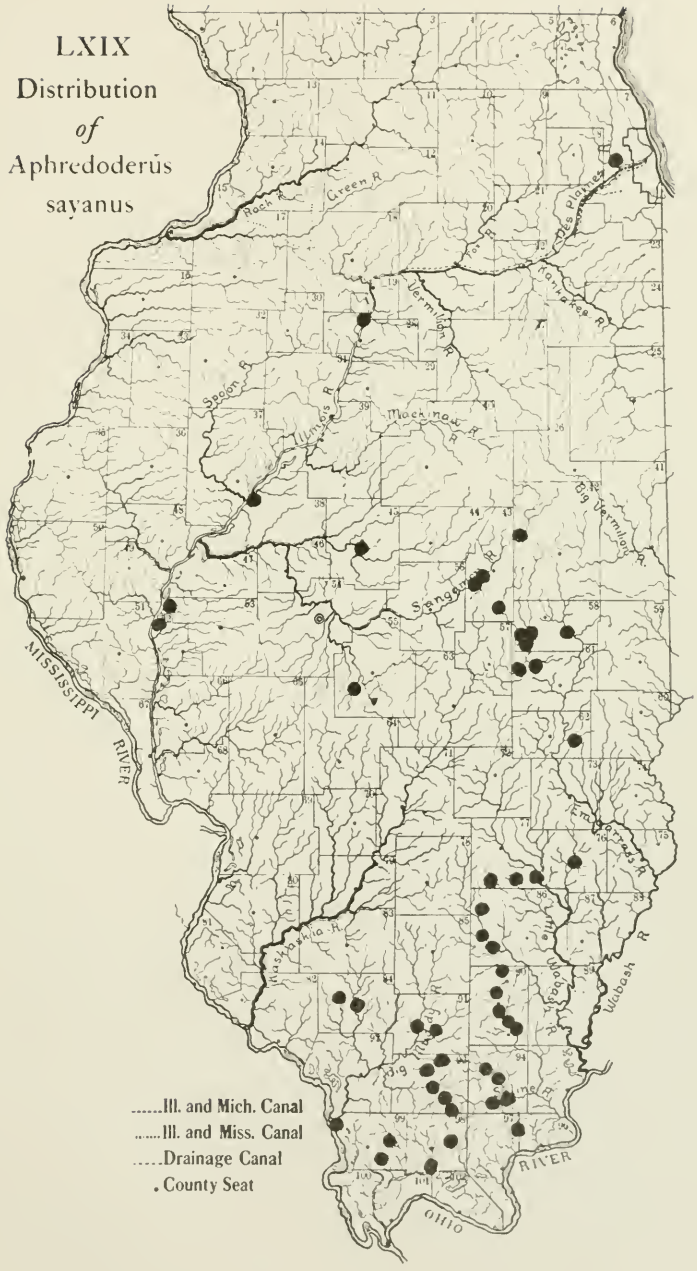
Gambusia

affinis

LXVII
Distribution
of
Percopsis
guttatus

LXVIII
Distribution
of
Labidesthes
sicculus

LXIX
Distribution
of
Aphredoderus
sayanus

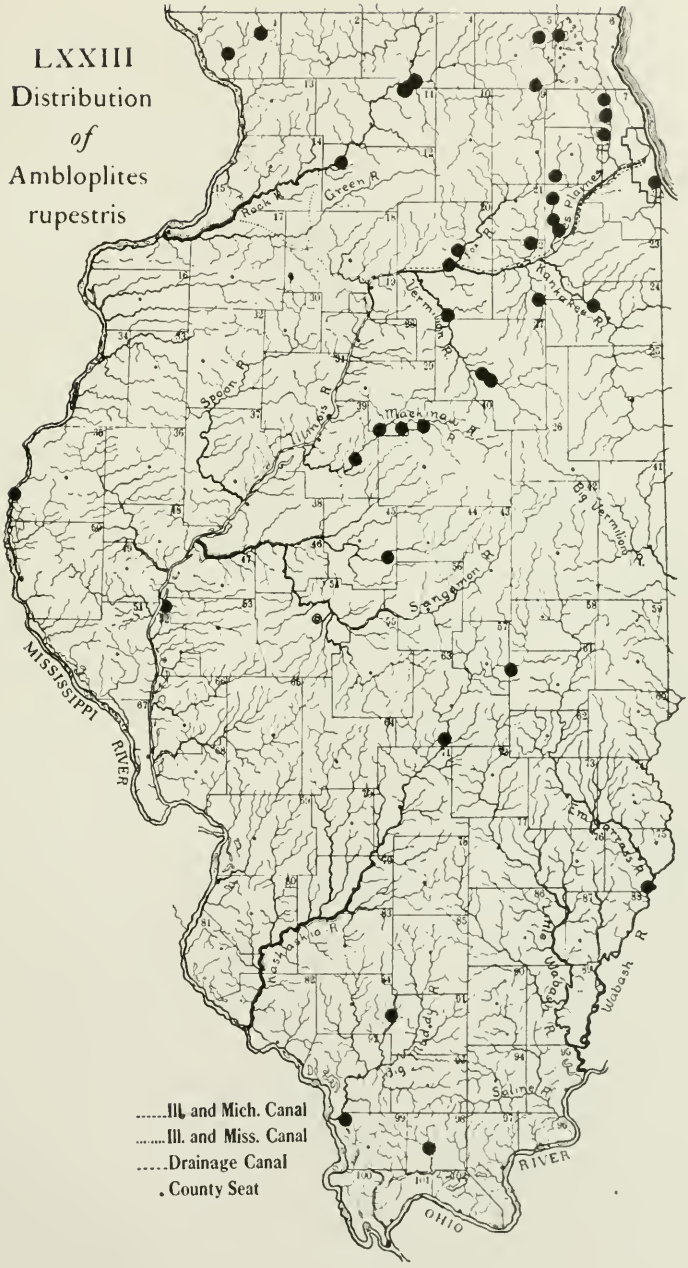


LXX
Distribution
of
Pomoxis
annularis

LXXI
Distribution
of
Pomoxis
sparoides

LXXII
Distribution
of
Centrarchus
macropterus

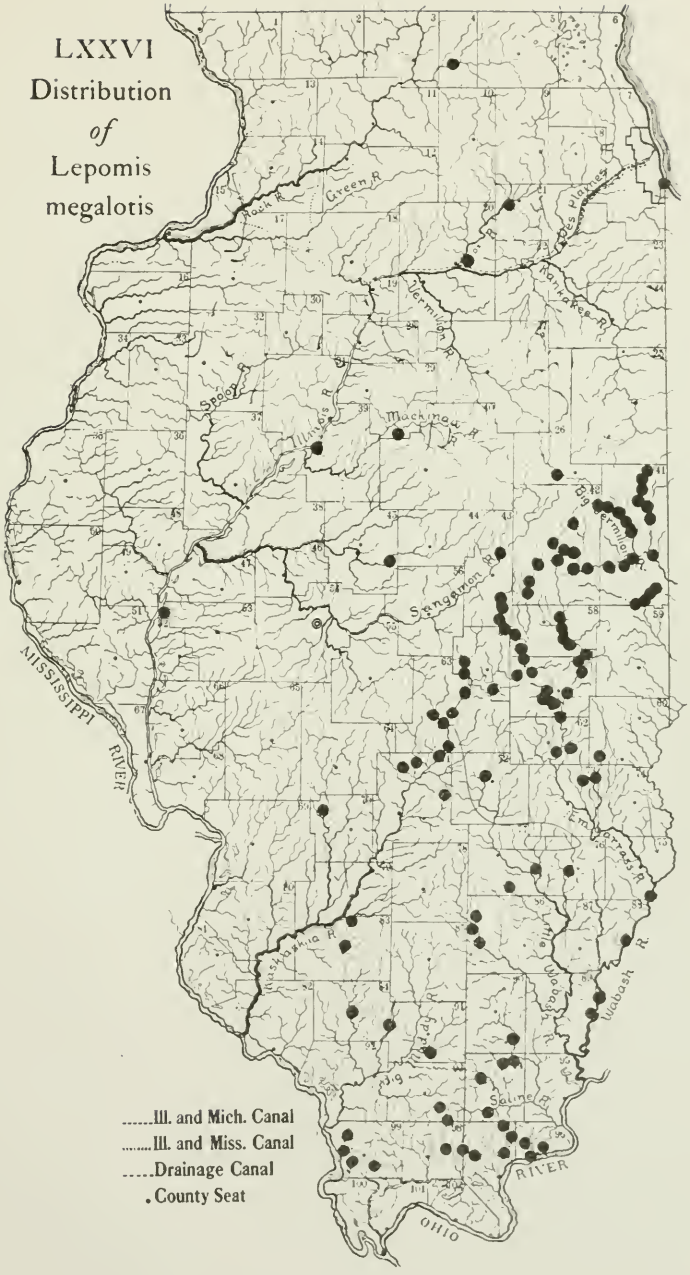
LXXIII
Distribution
of
Ambloplites
rupestris



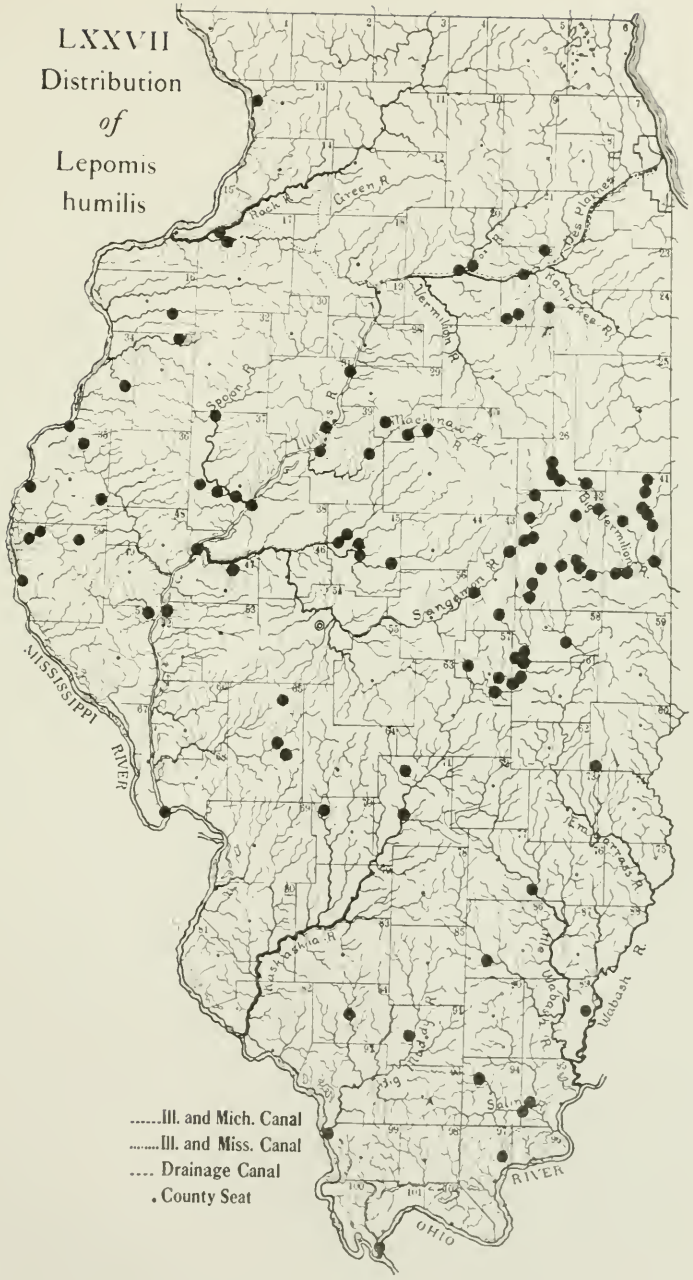
LXXIV
Distribution
of
Chænobryttus
gulosus

LXXV
Distribution
of
Lepomis
miniatus

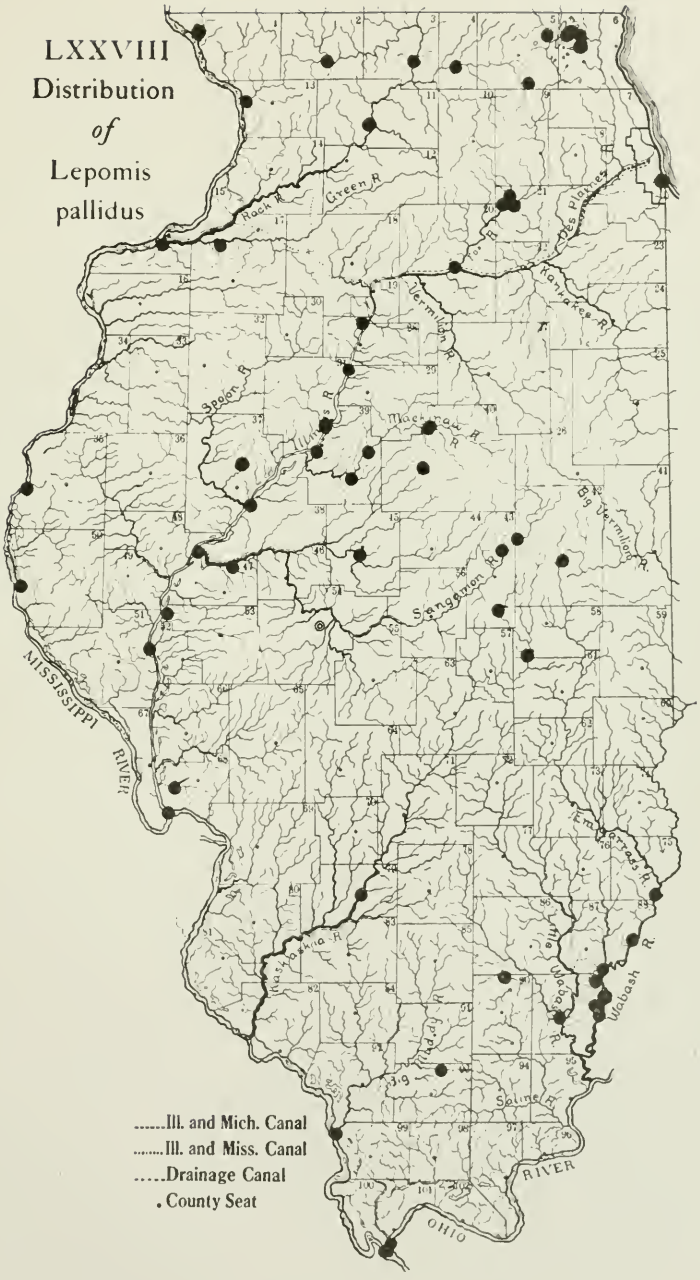
LXXVI
Distribution
of
Lepomis
megalotis



LXXVII
Distribution
of
Lepomis
humilis

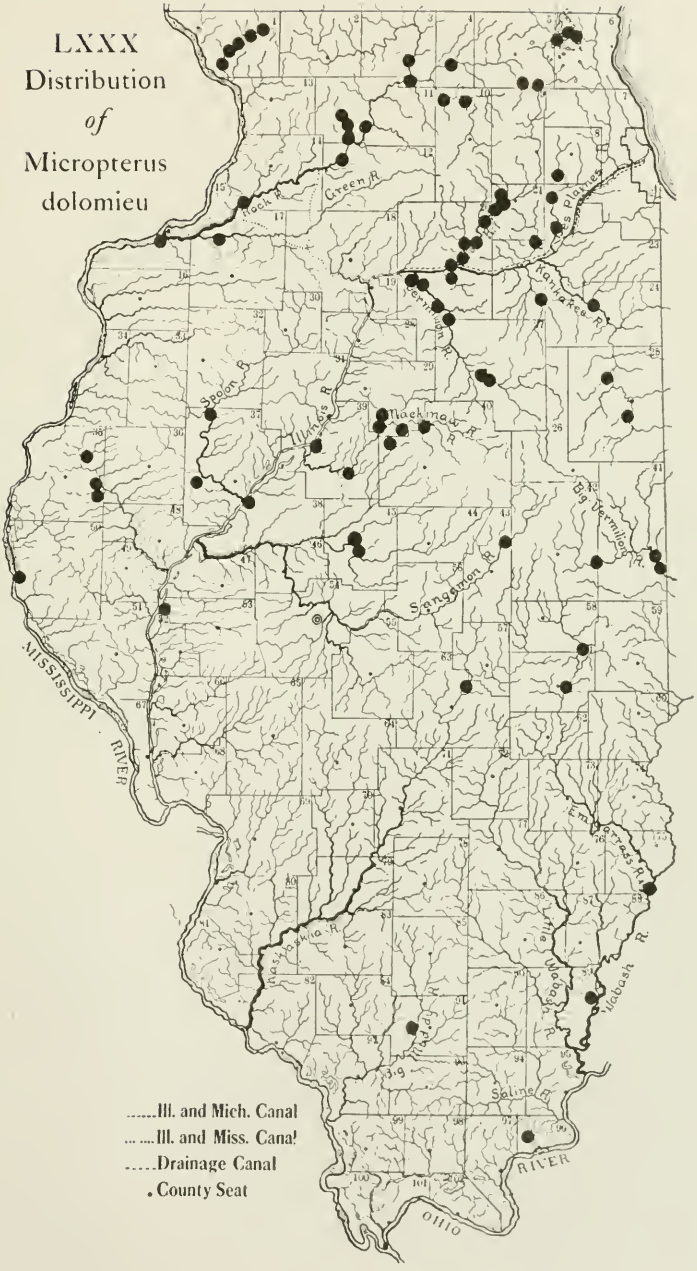


LXXVIII
Distribution
of
Lepomis
pallidus

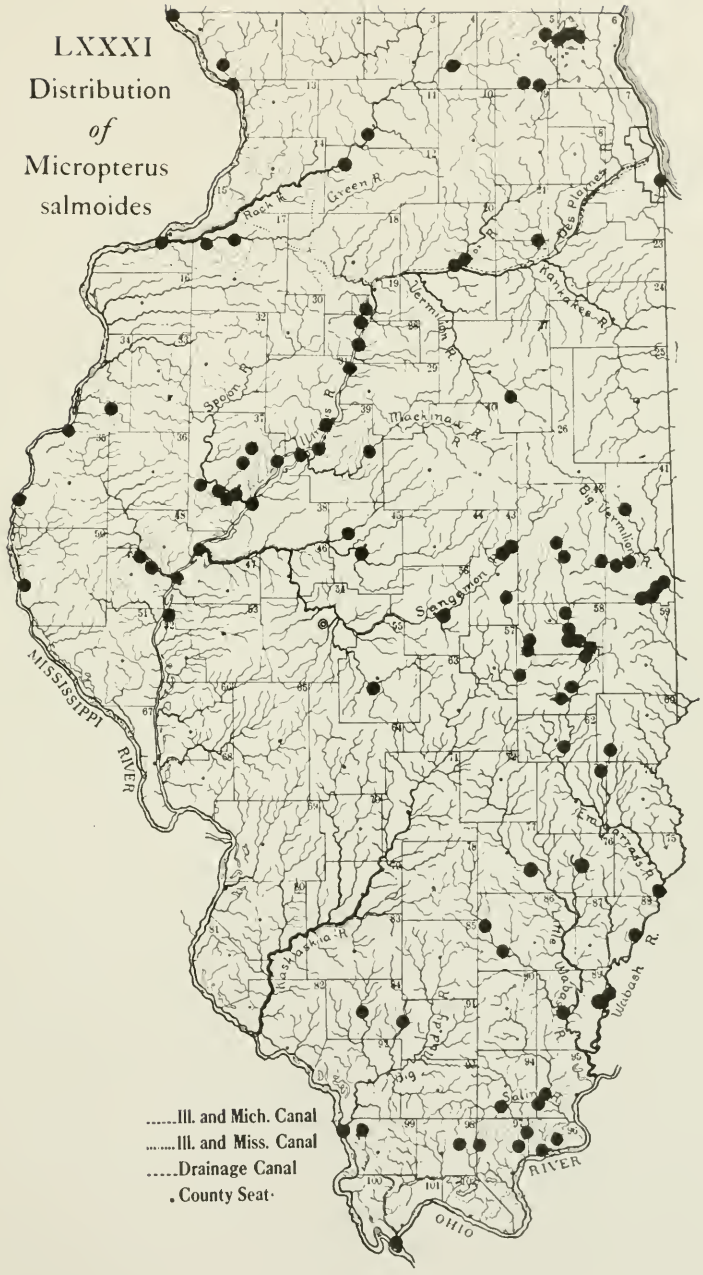


LXXIX.
Distribution
of
Eupomotis
gibbosus

LXXX
Distribution
of
Micropterus
dolomieu



LXXXI
Distribution
of
Micropterus
salmoides



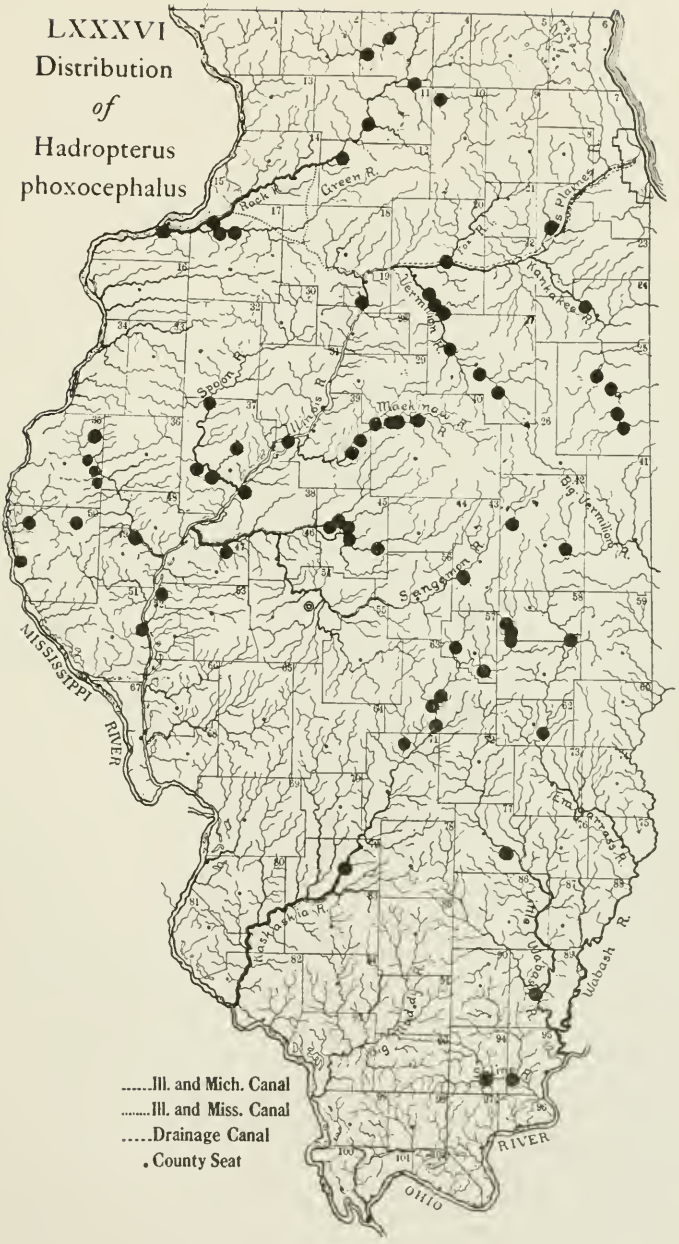
LXXXII
Distribution
of
Stizostedion
vitreum

LXXXIII
Distribution
of
Stizostedion
canadense
griseum

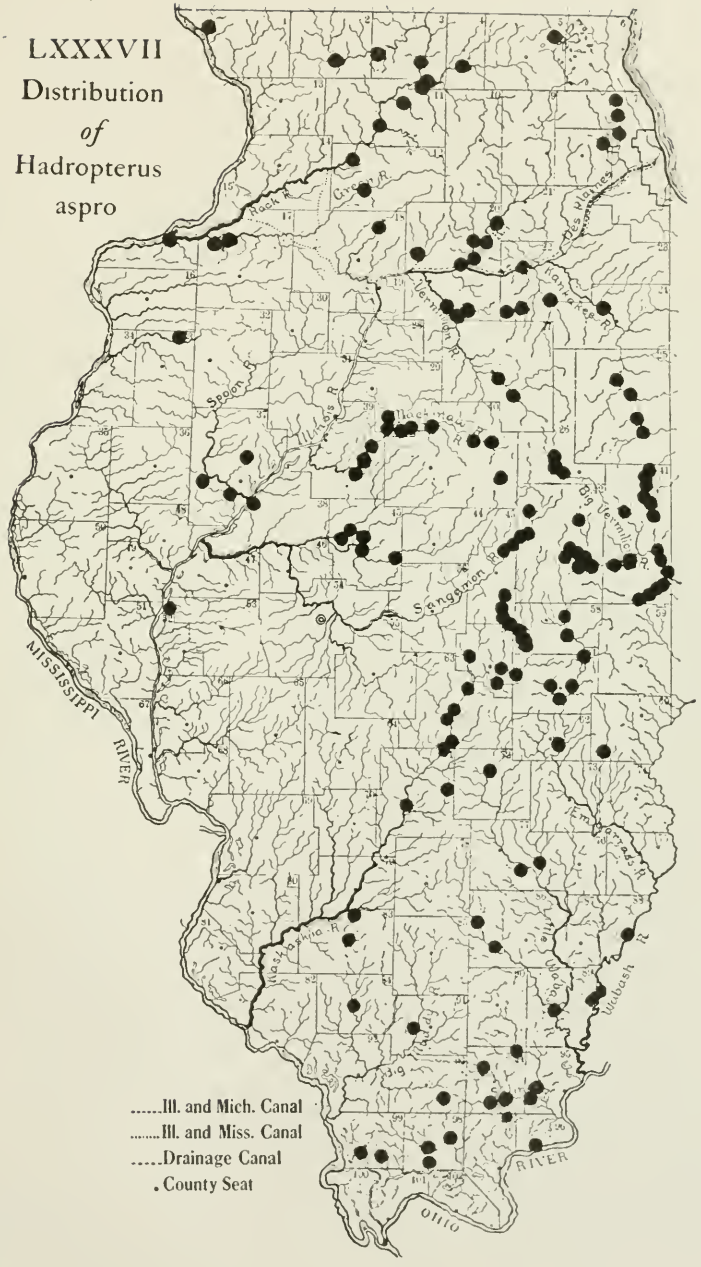
LXXXIV
Distribution
of
Perca
flavescens

LXXXV
Distribution
of
Percina
caprodes

LXXXVI
Distribution
of
Hadropterus
phoxocephalus



LXXXVII
Distribution
of
Hadropterus
aspro

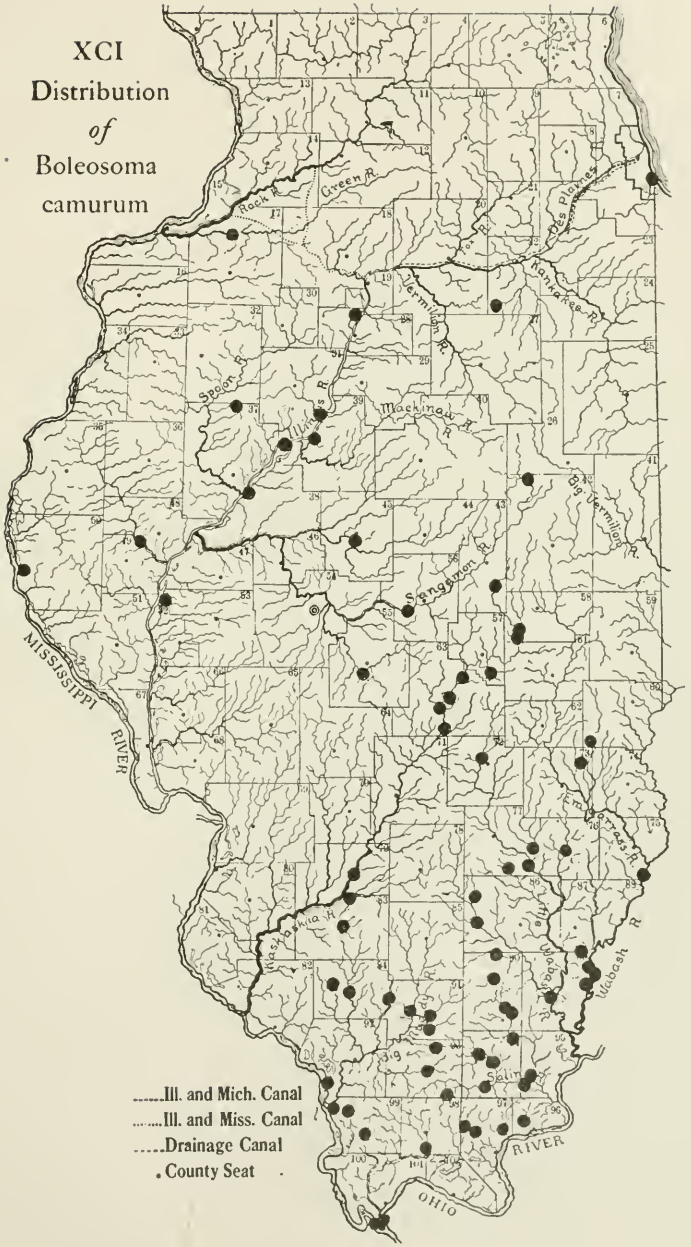


LXXXVIII
Distribution
of
Cottogaster
shumardi

LXXXIX
Distribution
of
Diplesion
blennioides

XC
Distribution
of
Boleosoma
nigrum

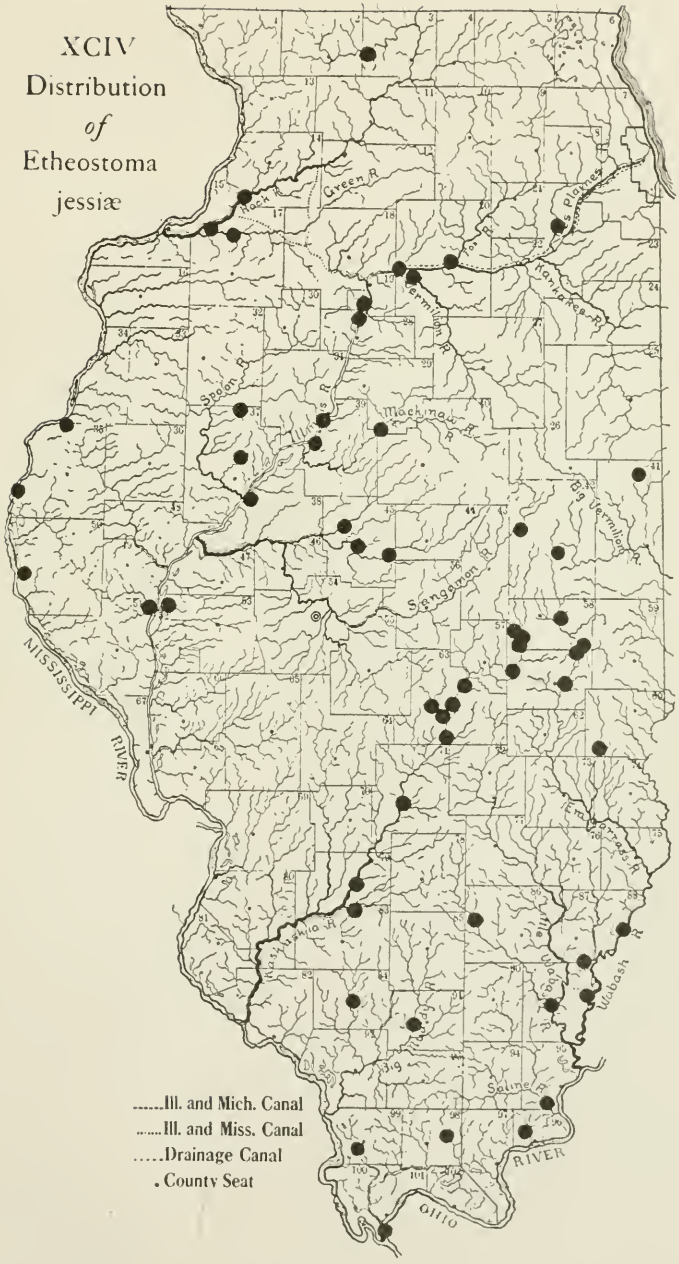
XCI
Distribution
of
Boleosoma
camurum



XCII
Distribution
of
Ammocrypta
pellucida

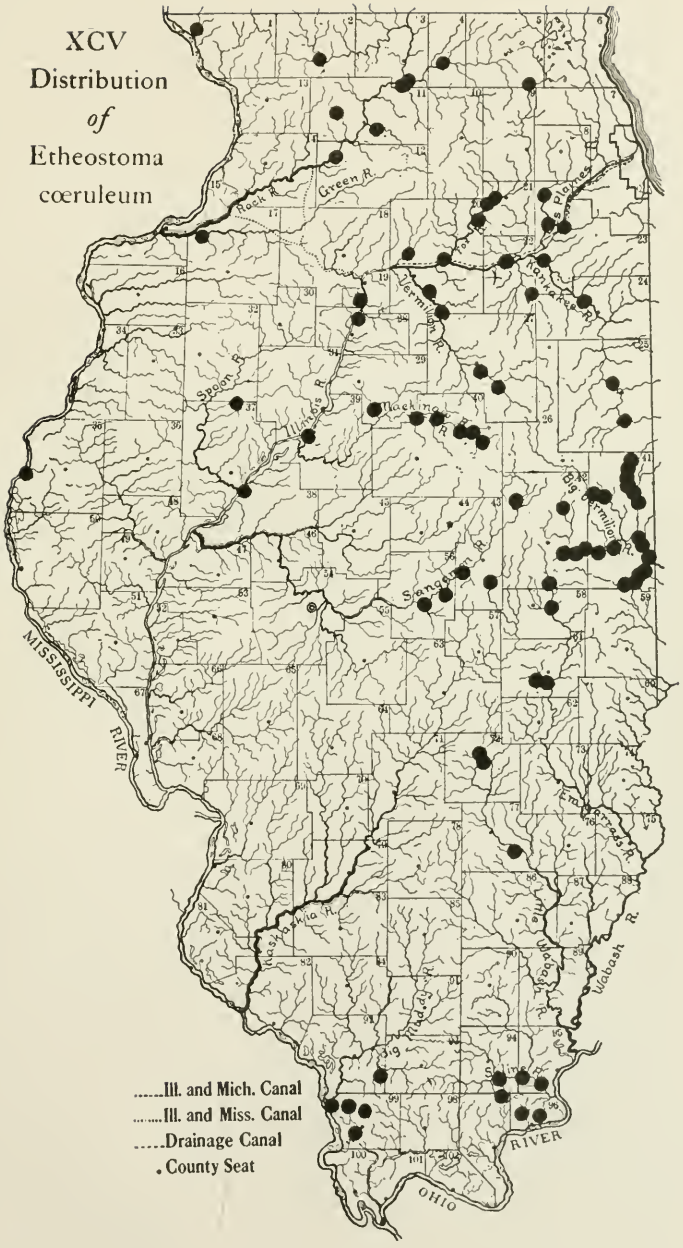
XCIII
Distribution
of
Etheostoma
zonale
Rock R.
Green R.
Vermilion R.
Kankakee R.
Illinois R.
Mackinaw R.
Big Vermilion R.
Sangamon R.
MISSISSIPPI RIVER
Embarras R.
Wabash R.
Saline R.
OHIO RIVER
.....Ill. and Mich. Canal
.....Ill. and Miss. Canal
.....Drainage Canal
. County Seat

XCIV
Distribution
of
Etheostoma
jessiæ



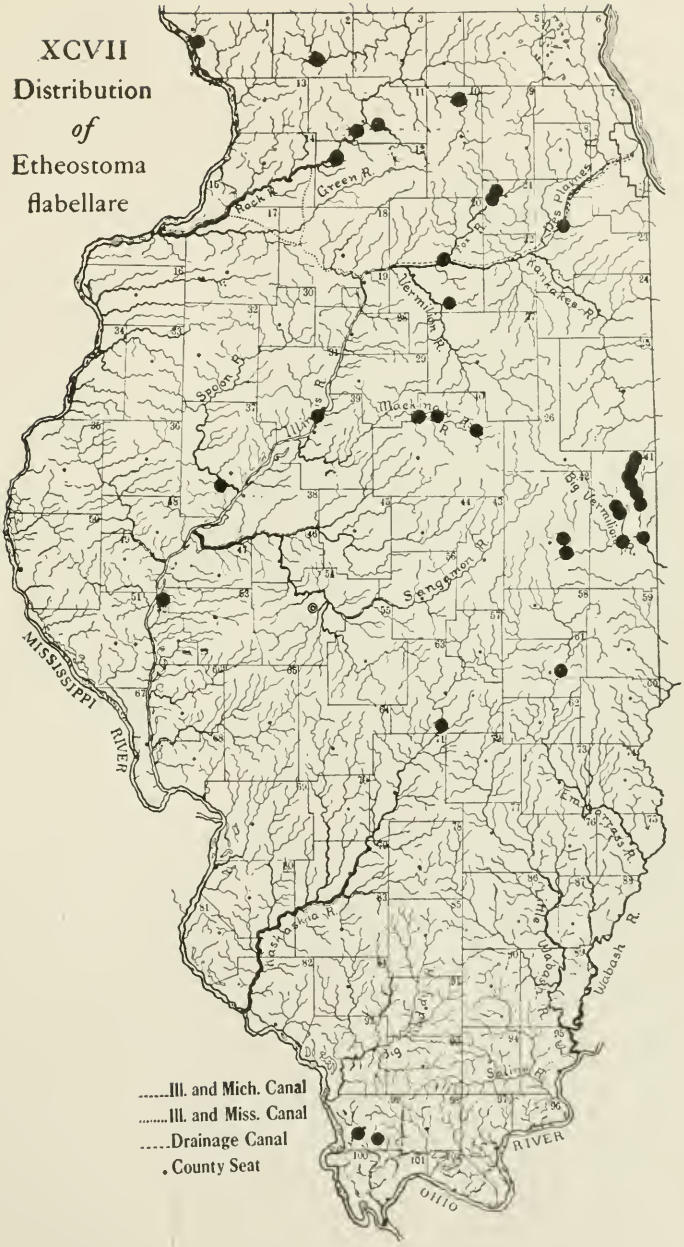
.....Ill. and Mich. Canal
.....Ill. and Miss. Canal
.....Drainage Canal
. County Seat

XCV
Distribution
of
Etheostoma
cœruleum



XCVI
Distribution
of
Etheostoma
squamiceps
Rock R.
Green R.
Kankakee R.
Vermilion R.
Spoon R.
Illinois R.
Mackinaw R.
Sangamon R.
Big Vermilion R.
MISSISSIPPI RIVER
Little Wabash R.
Wabash R.
Saline R.
OHIO RIVER
.....Ill. and Mich. Canal
.....Ill. and Miss. Canal
.....Drainage Canal
. County Seat

XCVII
Distribution
of
Etheostoma
flabellare



XCVIII
Distribution
of
Boleichthys
fusiformis

XCIX
Distribution
of
Microperca
punctulata

C
Distribution
of
Roccus
chrysops

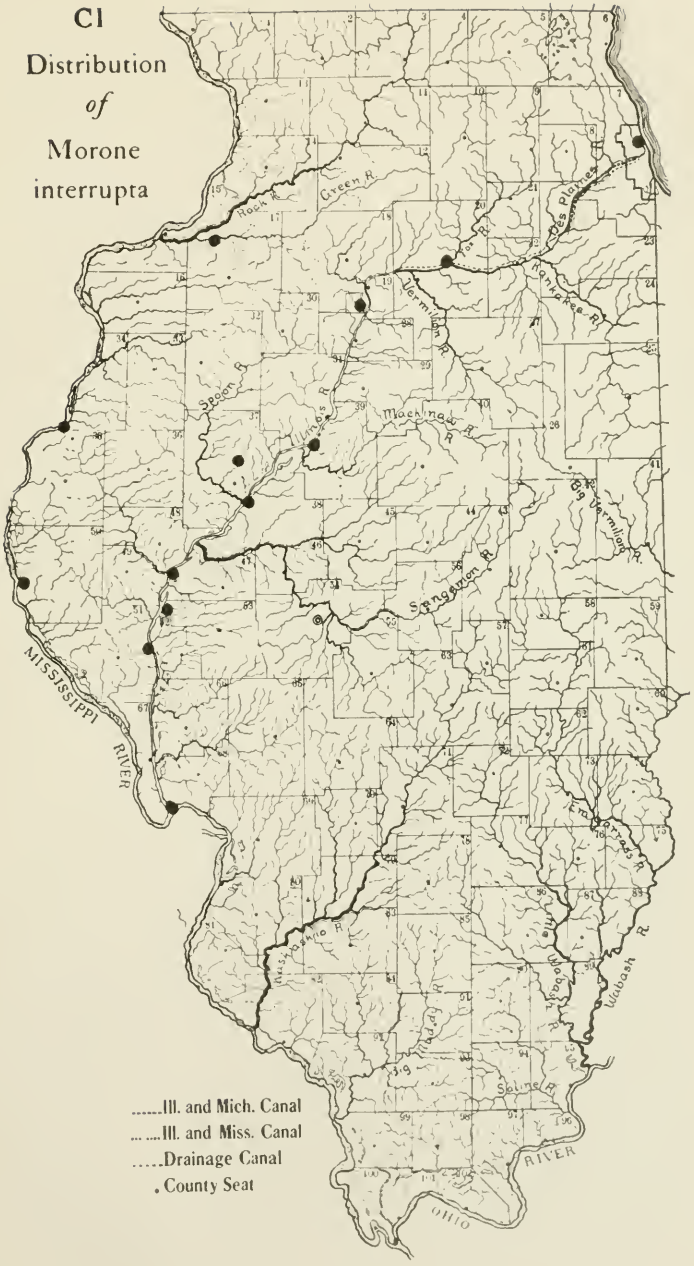
CI

Distribution

of

Morone

interrupta



CII

Distribution

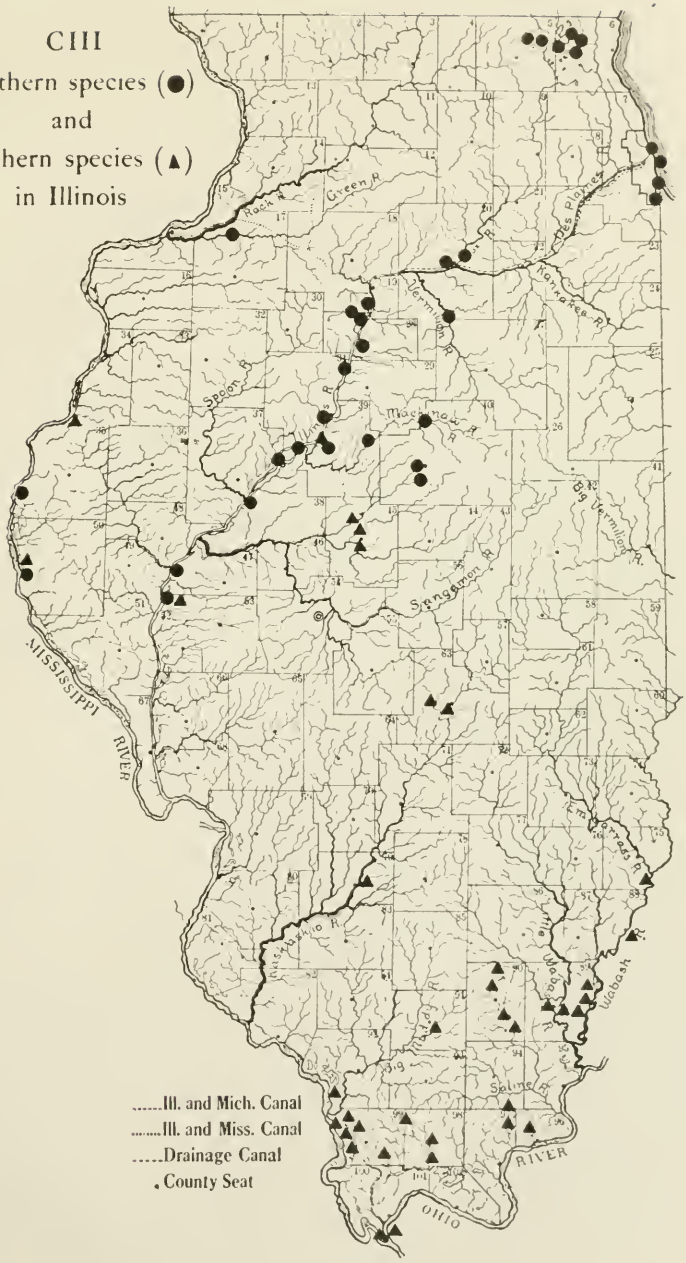
of

Aplodinotus

grunniens

CIII

Northern species (●)
and
Southern species (▲)
in Illinois



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